D.1.4 Inventory of knowledge providers in the water sector

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PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
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Executive Summary

The INNOWATER partnership aims to facilitate the access of new and innovative water technologies to the market. This access is now hindered by several barriers, including the lack of coordination between the research efforts of research organizations and innovative companies on the one hand and the end-users or water consuming industries on the other. Most often, new technologies are developed from a technology push perspective instead of a market pull perspective, creating a mismatch between the technologies required and the technologies actually developed. INNOWATER aims to address this gap. To be able to do so, it is important to reach out to the research organizations in each of the five INNOWATER countries. This report provides an overview of the main research organizations per country, their activities, current projects and the focus of their research.

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1. Introduction

The global water crisis is of the most fundamental challenges for Europe in the 21st century. Water scarcity, droughts, floods, ageing infrastructure, increasing energy demand and pollution are growing concerns in countries all over the continent. Europe will need to implement innovative technologies to be able to address these challenges. These technologies are available, but face large challenges to access the market, as innovation support for the water sector is relatively underdeveloped throughout Europe.

The INNOWATER partnership has been set up to address these challenges. The partnership aspires to develop and test new and better innovation support tools for innovative SME's and first user industries in the water sector to promote the market uptake of new technologies. During the three years INNOWATER will run, the partnership will offer specifically developed tools and professional advice on market access, finance, regulation, internationalisation, first-user customers and on available innovative technologies in the water sector. Furthermore, it will set up dedicated events and workshops bringing innovative technology companies and first-users actively together. INNOWATER is supported by the European Commission under the Competitiveness and Innovation Framework Programme (CIP).

INNOWATER is a public private innovation partnership of 15 innovation agencies, water associations, technology specialists, innovation experts and eco-innovative cluster organisations from Belgium, Denmark, Cyprus, Spain, the United Kingdom and the Netherlands, coordinated by the EWP.

1.1 Knowledge providers

One of the main challenges to implement innovative technologies on water is the large gap between the research / innovators and the market, i.e. the potential users of the technologies. More often than not, the research sector and innovative companies are developing new technologies from a *technology push* perspective, instead of from a *market pull*. This leads to a mismatch between the actual needs of the water-using industry and the new technologies that are available on the market. Furthermore, a large amount of interesting research and developments remains 'on the shelf' in research organizations and innovative companies because the expertise and resource to market this research is lacking. This gives a clear need for better cooperation and coordination between the research

organizations, the technology developing companies and the water-using industries (the end users).
The INNOWATER partnership will set up a complete and targeted set of tools and activities to assist innovative companies to bring their technologies to the market. Focusing on research organizations, which are the main subject of this report, INNOWATER will address the challenge of lack of cooperation and coordination by bringing research organizations, technology developing companies and water-using industries actively together in the various events that will be organized during the project. Most importantly, INNOWATER will organise a series of roadshows for the focus sectors in each of the five INNOWATER countries, highlighting the available most innovative technologies for the sector, and organizing match making events between the three stakeholders.

Secondly, INNOWATER will develop a new *tool* to foster *user-driven* innovation. Based on a study with end-users, a prototype tool will be developed and tested with innovative SME's and end-users throughout the course of the project. This tool will allow research organizations and innovative SME's to better focus their research efforts to the needs of the market.

To be able to set up these activities, an overview is needed of the research organisations in the five INNOWATER countries.

1.2 Set up of the report

In the tables below, for each country the main research organizations are listed in alphabetical order. For each organisation, a short description of the organisation, an overview of the current projects and focus of the research and the contact details are given. The information is brought together by the Netherlands Water Partnership – Innovation Bureau Watertechnology for the Netherlands; Atlantis Consulting for Cyprus; UKCEED, Envirolink Northwest and Orion Innovations for the UK; DHI for Denmark and CRANA for Spain (Coordinator).

1.3 Relation to other INNOWATER activities

The results of this research will be used to contact the research organizations in the five INNOWATER countries and have them actively participate in INNOWATER and the development of its tools. Furthermore, they will be invite to the relevant meetings in their respective countries.

2. Inventory of knowledge providers

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
UNITED KINGDOM			
ADAS	http://www.adas.co.uk/	ADAS is the UK's largest independent provider of environmental consultancy, rural development services and policy advice. The company has particular expertise in sustainable agricultural production, and has more than 700 environmental and rural development specialists, operating from a network of offices and research sites throughout the UK.	Some examples of typical projects/services are: ▪ Environmental and Catchment Sensitive Farming – undertaken for Natural England, helping land managers with cost effective diffuse pollution minimisation. ▪ Knowledge Transfer Activities - to support policy, regulatory and training matters involving the crop and livestock production and processing industries. ▪ Automating N: development of commercially-viable systems for automated, fine-scale adjustment of N applications to autumn-sown cereals.
Bristol University Water and Environmental Management Research Centre (WEMRC)	http://www.bris.ac.uk/civilengineering/research/water/wemrc	Part of the large and well recognized Department of Engineering.	Strong focus on flood risk management, water and health, biodiversity and hydraulic modeling.
Cambridge University Department of Materials Science & Metallurgy Centre for sustainable development	http://www.msm.cam.ac.uk/ http://www-g.eng.cam.ac.uk/sustdev/index.php	Dept Materials Science & Metallurgy Research Programmes include: Composites and coatings; materials electrochemistry; macromolecular materials; microstructural control; and advanced techniques for film and nanostructure growth. Centre for sustainable development has a strong focus on urban water and the developing world.	Project examples (Centre Sustainable Development) include ▪ Membrane Bioreactors (MBRS) as a Sustainable Solution for Wastewater Treatment in Mega Cities (2007-2008, MPhil Dissertation) ▪ Project Neptune (see Exeter University below).

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Cambridge University School of Technology, Department of Chemical Engineering and Biotechnology.	http://www.ceb.cam.ac.uk/ Professor Howard Chase,[1] hac1000@cam.ac.uk, +44 (0)1223 (3)34781 Dr Michael John,[2] mlj21@cam.ac.uk	Five principal research themes are: Biotechnology; Measurement; Microstructure Engineering; Modelling and Processes.	The Biochemical and Environmental Engineering group is focused on the application of novel separation techniques to a range of processing problems, primarily to reduce cost and improve efficiency. New techniques are currently being developed for the separation and recovery of valuable chemicals present in wastes. Research by the Magnetic Resonance group has application in the field of reaction engineering. The fluids and environment group incorporates research into separation and reaction operations using ceramic membranes, adsorbents, catalyst particles, and supports for mammalian cell culture and biomass growth.

[1] E.g. uncoupling of micro-organism metabolism in activated sludge waste treatment which can substantially reduce the amount of biomass produced; http://www.ceb.cam.ac.uk/people.php?action=view&id=1
[2] E.g. MR techniques and LB simulations are being used to assist in the development of biofilm reactors for the removal of radionuclides from contaminated water; http://www.ceb.cam.ac.uk/people.php?action=view&id=11

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Cranfield University Natural Resources Department (including Natural Resources Management Centre) Sustainable Systems Department (including Centre for Water Science)	http://www.cranfield.ac.uk/SAS/Departments/index.html Professor Simon Judd, s.j.judd@cranfield.ac.uk[3] Paul Jeffrey, p.j.jeffrey@cranfield.ac.uk[4] Keith Weatherhead, k.weatherhead@cranfield.ac.uk Jerry Knox, j.knox@cranfield.ac.uk	The *Centre for Water Science* is recognised internationally for its research, education, training and consultancy. The focus is on the science, engineering and management of water in municipal, industrial and natural environments. Cranfield is also the coordinating university for *STREAM*, an Industrial Doctoral Centre (IDC) in which research facilities are provided by a total of five universities (research facilities are provided by five Universities (Universities of Exeter, Newcastle Sheffield and Imperial College in addition). The IDC provides opportunities for industry to sponsor research projects and allows talented researchers to develop their skills and careers. *The Natural Resources Department* develops and exploits knowledge about natural systems to meet current and future social and economic needs for ecosystem services such as the production of food, fibre and bio-fuels, protection and enhancement of the environment, attenuation of floods and re-charge of aquifers.	Research at The Centre for Water Science encompasses treatment technologies, engineering, irrigation, socioeconomics and policy in relation to water quality and the natural, human and industrial environments. The following projects are of particular relevance: ▪ Aeration energy demand in membrane bioreactors ▪ AQUASTRESS ▪ Denitrification MBR ▪ Fate of metals in wastewater treatment STREAM[5] has a strong focus on urban water management, but this also includes research into novel instrumentation and control technologies. The Natural Resource Department encompasses research into sustainable agriculture, rural livelihoods and agri-environmental systems; Modelling integrated land and water management in the context of economics and climate change; and soil management and conservation.
University of Dundee School of Engineering, Physics and Mathematics	http://www.dundee.ac.uk/civileng/research/	Research within the Division of Civil Engineering is undertaken within two thematic groups, namely Environment and Infrastructure.	Research within the Environment theme encompasses problems and processes related to: The health and quality of the water, air and land environments; The protection, exploitation and improvement of these regions. Environmental topics presently under investigation include dispersal of particulates from wastewater discharges.

[3] E.g. Aeration energy demand in membrane bioreactors; Fate of metals in wastewater treatment; Denitrification MBR
[4] E.g. AQUASTRESS - Mitigation of Water Stress through new Approaches to Integrating Management, Technical, Economic and Institutional Instruments
[5] http://www.stream-idc.net/

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University of East Anglia, Water Security Research Centre	http://www.uea.ac.uk/watersecurity	A multi-diciplinary centre that focuses on water security and the relationship between water global water security and carbon and energy security; Groundwater development; Catchment management; Water availability; Water allocation; Climate change; Extreme events; Rain-fed agriculture; Irrigated agriculture; Transboundary cooperation.	Recent research projects primarily focused on Africa and Asia.
East Malling Research	http://www.emr.ac.uk/	East Malling Research (EMR) is an independent provider of top-class research, development and consultancy serving the food chain and other sectors of the land-based industry. EMR is a company limited by guarantee and a registered charity. The East Malling Research Association (EMRA) is the principal conduit for the dissemination of knowledge and information from EMR. It is a subscription-based organisation.	Research includes: ▪ Combined use of thermal and fluorescent imaging to measure water use efficiency ▪ Improving water use efficiency and tuber quality in potato production by optimising irrigation scheduling ▪ Partial root drying: delivering water savings and sustainable high quality yield into horticulture ▪ WaterLINK: Enhancing the quality of hardy nursery stock and sustainability of the industry through novel water saving techniques.
Exeter University Department of Engineering; The Centre for Water Systems	http://centres.exeter.ac.uk/cws/about-us	Established in 1994, the Centre, is led by Professors Dragan Savic and David Butler, and has a complement of 25-30 personnel at any one time (7 academic staff and a number of research fellows, assistants, students and support staff). The Centre brings together researchers from civil, environmental, computational and other areas of engineering.	Strong focus on urban water systems and hydroinformatics. See for example, 'Project Neptune' which aims 'to advance knowledge and understanding about water supply systems in order to develop novel, robust, practical techniques and tools to optimize efficiency and customer service, through dynamic control or other means'. Project is being conducted in collaboration with Yorkshire Water Services, United Utilities and AAB.

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University of Glasgow Water & Environment Research Group	http://www.gla.ac.uk/departments/civilengineering/research/wande/	Part of the Civil Engineering Faculty.	Research is undertaken in four main areas: ▪ Microbial communities and their relation to wastewater and biotechnologies ▪ Fluvial and river engineering ▪ Sustainable development and water resources in developing countries ▪ Estuary and Coastal Engineering and Impacts of Climate Change.
University of Hertfordshire, Agriculture and Environment Research Unit[6]	http://sitem.herts.ac.uk/aeru	AERU is at the forefront of adopting state-of-the art modelling and risk assessment techniques to evaluate the overall sustainability of agricultural and horticultural production systems.	Examples projects include: Sustainability of the UK Strawberry Crop in which different production systems were assessed in terms of their environmental impact. Key variables included materials used for tunnels, mulch and irrigation pipe, the sterilisation of soil with fumigants, delivery of irrigation water and the use of peat substrate in some container grown crops. Modelling the pathways and impacts of agricultural pollutants. And developing software for use by farmers for on-site risk assessment for pesticide use.[7]
Heriot-Watt University Sustainable Water Management Group	http://www.hw.ac.uk/research/areas/environment-and-climate-change.htm		Strong focus on flood risk management and urban drainage.

[6] E.g. material flows and balancing used in water and waste efficiency assessments
[7] http://sitem.herts.ac.uk/aeru/projects/pestrisk/index.htm

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Imperial College, London Environmental and Water Resources Engineering (EWRE)	http://www3.imperial.ac.uk/ewre Professor Nigel Graham; + 44 (0)20 7594 6121; n.graham@imperial.ac.uk	One of the largest sections in the Civil and Environmental Engineering Department of Imperial College London.	Main research areas are: Hydrology; Urban water; Drinking Water and Wastewater Contaminants and Treatment Technologies; Environmental Control & Waste Management. Current projects within the wastewater contaminants area include: ▪ Electrocoagulation reactors for water treatment ▪ Polymer coagulants for water treatment ▪ Mathematical modelling of granular media filtration processes for water treatment ▪ Oxidation processes for water and wastewater treatment ▪ Production of activated carbon from sewage sludge.
University of Lancaster The Lancaster Environment Centre	http://www.lec.lancs.ac.uk/research/	LEC is one of 5 key areas of investment at Lancaster, with a total of £25M spent on the LEC complex and facilities since 2003. NERC's Centre for Ecology and Hydrology (CEH) is a strategic partner with LEC. There are 5 Integrating Research Centres (IRC) ▪ Centre for Chemicals Management ▪ Centre for Sustainable Agriculture ▪ Centre for Sustainable Water Management ▪ Centre for Environmental Informatics ▪ Centre for Sustainable Energy The LEC is also the lead academic organization for 'Sustainable Water Use' research within N8, a group of eight universities which have formed an alliance in order to help northern businesses become more competitive by using the research excellence of the universities to innovate faster and take a larger share of growth markets.	Research at The Centre for Sustainable Water Management[8] focuses on: ▪ hydrological and hydrochemical modelling ▪ field-based land and water monitoring ▪ the development and application of new technologies ▪ the sociology of water resource allocation and water consumption The N8 Water Group has developed a number of core themes with business and industry which include: ▪ Water footprints - driving sustainable and efficient use of water in manufacturing ▪ EcoCities - urban regeneration and new build to meet the challenges of climate change ▪ Water for life - safe clean water for emerging technologies and delivering on our commitment to the UN Millennium Development Goals ▪ Catchment knowledge and technology integration.

[8] http://www.lec.lancs.ac.uk/cswm/cswm_front.php

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University of Leeds	http://www.wateratleeds.org/	A new interdisciplinary research group called Water@Leeds will focus on the impact of climate change on water processes. It will also investigate more efficient, sustainable ways to capture, store, treat, use and recycle H2O.	Areas of research at Water@Leeds include: ▪ Measuring, modelling and controlling diffuse pollution from land management practices ▪ Nutrient cycling of carbon, nitrogen and phosphorous in soil, sediment and water ▪ Monitoring and treating water discolouration ▪ Exploring green techniques for the treatment of wastewater ▪ Optimising the performance of wastewater treatment plants ▪ Developing nutrient recovery technologies ▪ Low-cost wastewater treatment and reuse strategies ▪ Understanding the fate of pathogens in treated effluents and biosolids ▪ Sustainable agriculture.
Liverpool John Moores University Liverpool Centre for Environmental Technologies (LCET)	http://www.ljmu.ac.uk/BLT/BEST/94496.htm	LCET's main focus is the management of wastewater systems, maximising the collection and recycling of water used during many industrial processes. LCET offers companies' bespoke research and consultancy services.	Wastewater treatment. Current project examples include: ▪ Studying the effectiveness of hydrodynamic vortex separators in removing and retaining solids from wastewater streams (funded by Hydro International plc.) ▪ Bioreactor design to enable sustainable biological phosphorus removal from wastewater (KTP with United Utilities).
University of Liverpool Institute for Sustainable Water Management (SWIMMER)	http://www.liv.ac.uk/swimmer/	SWIMMER is the new hub for water related research within the University of Liverpool. The Institute has been established to encourage joined-up thinking in the water & environmental sciences, to promote interdisciplinary collaboration, and facilitate first-class research.	Many ongoing research projects focus on the ecosystem level. Particularly relevant projects include: ▪ Technology Opportunities in the Water and Wastewater Sector - EU ERDF funded project ▪ Sustainable river catchments for the South East (SuRCaSE), incorporates free tailored advice on water efficiency, water audits and rainwater harvesting, contributing to the sustainability of the region's water resources.
Loughborough University Water Engineering and Development Centre	http://wedc.lboro.ac.uk/	Based in the Department of Civil and Building Engineering.	Strong focus on the developing world (in terms of water supply). Also flooding and erosion.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
University of Manchester School of Chemical Engineering and Analytical Science	http://www.ceas.manchester.ac.uk/ http://www.ceas.manchester.ac.uk/research/centres/centreforprocessintegration/	The sustainable industrial systems research group is one of four groups within the School of Chemical Engineering and Analytical Science. Research in the area of process design and integration is carried out within the internationally-acclaimed Centre for Process Integration (CPI).	The Sustainable Industrial Systems research group covers systems analysis, process design and integration, innovative manufacturing, clean and clean-up technologies, sustainable resource management (water, waste, renewable feedstocks), energy, and environmental pollution, monitoring and modelling. Centre for Process Integration has four research topics: Efficient Use of Raw Materials, Energy Efficiency, Emmisions Reduction and Process Operation. The emissions reduction topic includes ▪ Water and Wastewater Minimisation ▪ Distributed Effluent Treatment ▪ Simultaneous Energy and Water Minimisation.
Manchester Metropolitan University Science and Engineering Faculty	http://www.dri.mmu.ac.uk/	Department of Environmental and Geographical Sciences.	Research focus into next generation biological wastewater treatment. In addition, Advanced Bioprocess Development is a University spin-out company, that designs and optimises biological wastewater treatment processes for licensing or under contract. Processes are based on simple, expanded bed technology.
NERC (Natural Environment Research Council) Centre for Ecology and Hydrology (CEH) Plymouth Marine Laboratory (PML)	http://www.ceh.ac.uk/ http://www.pml.ac.uk/research/	The Centre for Ecology & Hydrology is a Centre of Excellence for integrated research in terrestrial and freshwater ecosystems and their interaction with the atmosphere. Plymouth Marine Laboratory has three core research themes: biodiversity and sustainable ecosystems; marine biogeochemistry; environment and health.	Within the Water programme, principal areas of research at CEH include: ▪ Water quality ▪ Water balance of peri-urban systems ▪ Prediction and modeling of hydrological extremes The environment and health research theme at PML encompasses ▪ Impact of pollution ▪ Assessing pollutants.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Newcastle University School of Civil Engineering and Geosciences: Water Resource Systems Research Unit; Environmental Engineering School of Chemical Engineering and Advanced Materials (CEAM)	http://www.ceg.ncl.ac.uk/water/research/ Dr Paul Quinn http://www.ceg.ncl.ac.uk/environment/index.htm Professor Tom Curtis http://www.ncl.ac.uk/ceam/research/ Prof Keith Scot	Principal research themes of the Water Resource Systems lab are: ▪ Catchment Hydrology and Sustainable Management ▪ Hydroinformatics ▪ Flood Risk and Coastal Management ▪ Climate Change Impacts and Adaptation ▪ Land and Water Resources Management in the Developing World. Principal research themes of the Environmental Engineering Group are: ▪ engineered biological systems ▪ treatment of acidic and metalliferous waters ▪ biochemical processes in contaminated water, soils and sediments ▪ safe water and sanitation in developing countries Principal research themes of CEAM are: ▪ Chemical Engineering Science ▪ Measurement and Analysis ▪ Products and Processes ▪ Natural Resources	Newcastle University has a strong focus on biological wastewater treatment plants, including microbial fuel cells. Specific examples include ▪ ECOSERV - designed ecosystem services for biological treatment ▪ To develop a potential energy self sufficient process to treat waste and waste water using Microbial Fuel Cel ▪ Biological and Microbial Fuel Cells (BMFC) ▪ Can Understanding the Emergent Behaviour of Mixed Culture Systems Aid in Wastewater Treatment System Design and Operation (ie understanding the behavior of micro-organisms in WWT)?

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Oxford Centre for Water Research	http://ocwr.ouce.ox.ac.uk/	As of November 2009, the Oxford Centre for Water Research became the Oxford Water Futures Programme.	OCWR Research Themes: ▪ Managing Extremes - Water Scarcity and Floods ▪ Climate Change and Hydrology ▪ Managing Water Quality and Ecosystems ▪ Water Governance, Economics and Law ▪ Water Management and Policy Within Managing Water Quality and Ecosytems, ongoing research includes: 'Waste Waters and Sanitation'. There is a growing interest in the control of chemicals and industrial wastewaters including the potential for toxicity testing, on decentralized advanced wastewater treatment and reuse, and on capacity building and strengthening of developing world water utilities.
Pennine Water Group (Universities of Sheffield and Bradford).	http://www.sheffield.ac.uk/pennine watergroup/	An Engineering and Physical Sciences Research Council (EPSRC) funded Platform Grant centre dedicated to research into water and wastewater.	Strong focus on urban water management. Current projects include: ▪ Deploying Synthetic Biology in the Water Industry ▪ Ozone plasma microreactor development and field trials ▪ Field trials of microbubble flotation actuated by fluidic oscillation.
UKWIR	http://www.ukwir.org/site/web/contents/about-ukwir/about-ukwir	UKWIR was set up by the UK water industry in 1993 to provide a framework for the procurement of a common research programme for UK water operators. Over the last 15 years, UKWIR subscribers have contributed some £50m with a further £30m of research coming from UKWIR collaborators, resulting in over 750 reports delivered to members.	Strong focus on Utilities. The research programme is currently divided into the following topic areas: drinking water quality and health; toxicology; water resources; climate change; wastewater treatment and sewerage; sewage sludge; water mains and services; sewerage; leakage and metering; as well as customer and regulatory issues. Current relevant projects include: ▪ Fate of pathogens following biosolids applications to soil under varying conditions ▪ Phosphorus life cycle management ▪ Investigation of the impact of historic biosolids applications on soil microbial activity ▪ Cost benefit of baseline water efficiency activity.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
University of Reading Centre for Horticulture and Landscape	http://www.horticultureandlandscape.reading.ac.uk/hlm_research.htm	The Horticultural Technology Unit (HTU) is a self-financing unit within the Centre for Horticulture & Landscape, the School of Biological Sciences at the University of Reading, which enables the Centre to conduct research and consultancy contracts commissioned by industry and other companies.	The Horticultural Technology Unit conducts research into: ▪ grower-focussed horticultural software, specialising in crop scheduling systems ▪ Assessment of novel products, shelf life trials, chemical analyses.
University of Warwick Warwick HRI	http://www2.warwick.ac.uk/fac/sci/whri/research/ Rob Lilliwhite Andrew Thompson	Research at Warwick HRI is organised in three broad thematic groups: Plant Science, Crop and Environmental Sciences and Applied Microbial Sciences.	Crop and Environmental Sciences encompasses research into: ▪ Environmental accounting (carbon, water and environmental footprinting) ▪ Composting, anaerobic digestion and the application of organic materials to agricultural land ▪ Genetic control of traits related to water use.
WRc	http://www.wrcplc.co.uk/	WRc is a research-based group, providing private consultancy in the water, waste and environment sectors. The Research Foresight Partnership, is an initiative that WRc is managing for a group of major UK water utilities. The principle objectives include: To set agendas and establish priorities to advance insights into specific issues faced by the water sector, identifying programmes of work that will deliver demonstrable results to the Members of the Partnership. To establish a more inclusive mechanism for management, delivery and implementation of applied research programmes. Portfolio is a £1.5m per annum shared-cost research programme, managed by WRc, for the water, waste and environmental industries. Partners include specialist Universities, CIRIA, British Hydraulics Research, Institute for Underground Infrastructure and Electricity Research Association.	Portfolio research topics include: ▪ Wastewater Tertiary Treatment using Renewable Energy Crops ▪ Odour Enclosures - Optimising Ventilation Costs ▪ Alternative filtration media ▪ Towards chemical free treatment ▪ Optimisation of filter backwashing.

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NETHERLANDS			
Technical University Delft	http://www.tudelft.nl/live/pagina.jsp?id=facd8ccb-fba2-4c70-aa6a-a6985c9a1437&lang=en	Society is the continuous incentive for research. The TU Delft carries out research to find solutions for society's present and future demands. Fundamental research is part of this, because they aim to find solutions for tomorrow's problems. Health, energy, environment (including water) and infrastructures & mobility are today's major social issues. That's why TU Delft pays extra attention to developing solutions in these four domains.	We love water; swimming water, drinking water, washing water, all water that has to be produced and transported. After it is used it has to be collected, transported again and mostly treated (in the Netherlands, municipalities administer already 100,000 km of sewerage systems). All different things the section SANITARY ENGINEERING of the department water management of the faculty civil engineering and geosciences is working on. But besides loving it, it is also a threat: sometimes there is too much, sometimes to little. We have all seen pictures of extreme floods and extreme droughts. The behavior of water in the atmosphere, on and under the surface is the area of interest of HYDROLOGY (one of the chairs of the department water management). With this information, predictions can be made; where the water will be at what moment, after heavy showers or under changing circumstances like climate change or deforestation. How to regulate this water for a optimum use and/or a minimum of damage is the area of interest of WATER RESOURCES MANAGEMENT, another chair of the department water management. The following research fields are identified by Deltares Section Sanitary Engineering ▪ Chair of Drinking Water ▪ Chair of Waste Water Treatment ▪ Chair of Sewerage Section Water Resources ▪ Chair of Hydrology ▪ Chair of Water Resources Management

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University of Twente	http://www.universiteittwente.nl/research	The University of Twente is a young, entrepreneurial university. It sets standards in the field of new technology and seeks to stimulate change, renewal and progress in society. Their strength lies in the capacity to combine. They work with the technologies of the future - information technology, biotechnology and nanotechnology - in which behavioural and social science research play a vital role. After all, the most interesting and relevant innovation takes place at the interface between technology and its implications for mankind and society. They are active in areas such as health, water, sustainability, security and education.	No specific research agenda available

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Wageningen University (WUR) + Alterra	http://www.wageningenuniversity.nl/UK/research/ http://www.alterra.wur.nl/UK/	Wageningen UR conducts research within the domain of 'healthy food and living environment'. The scientific quality of Wageningen University is assured by seven graduate schools responsible for carrying out all university research. Alterra is the research institute for our green living environment. Alterra is part of Wageningen University & Research centre and offers a combination of practical and scientific research in a multitude of disciplines related to the green world around us and the sustainable use of our living environment: knowledge of water, nature, biodiversity, climate, landscape, forest, ecology, environment, soil, landscape and spatial planning, geo-information, remote sensing, flora and fauna, urban green, man and society etc. For water research Alterra established the Centre for Water and Climate.	The Centre for Water and Climate was established in 2003 and comprises at present seven chair groups of Wageningen University and four teams of Alterra. The teams and chair groups have a different scope of activities but ample opportunities for collaboration. The Centre faces the challenge to transform the synergy potential in various fields of research, use of facilities, education, capacity building, acquisition and organizational matters into concrete research strategies, integrated research projects and benefits for staff, teams and chair groups. ▪ Aquatic Ecology and Water Quality Management ▪ Irrigation and Water Engineering Group ▪ Laboratory of Geo-information Science and Remote Sensing

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
TNO	http://www.tno.nl/content.cfm?context=overtno&content=overtno&item_id=30&Taal=2	TNO is an independent research organisation whose expertise and research make an important contribution to the competitiveness of companies and organisations, to the economy and to the quality of society as a whole. TNO's unique position is attributable to its versatility and capacity to integrate this knowledge. Innovation with purpose is what TNO stands for. They develop knowledge not for its own sake but for practical application. To create new products that make life more pleasant and valuable and help companies innovate. To find creative answers to the questions posed by society.	There is a growing shortage of drinking water sources all over the world. This is caused in part by climate change, with rainwater getting scarcer in certain places, and in part by increasing demand. TNO contributes to sustainable solutions for this problem through: ▪ the development and application of technologies to treat water ▪ the development and application of entirely new water systems and Concepts Three themes are central to this: water and health, water and reuse and water and energy. TNO approaches water issues through combining membrane technology, microbiology and electro chemistry. IT works closely with universities, suppliers, equipment builders, system suppliers, and end users to implement new technology and also with the authorities to implement new process concepts. TNO Watertreatment has 10 patents. TNO is able to partner for research, development, testing, advice, pilots, implementation and demonstration. It is currently involved in phosphate recovery from waste water.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Wetsus	http://www.wetsus.nl/pageid=7/Wetsus_information_&_news.html	Wetsus, centre of excellence for sustainable water technology is a facilitating intermediary for trend-setting know-how development. Wetsus creates a unique environment and strategic cooperation for development of profitable and sustainable state of the art water treatment technology. The inspiring and multidisciplinary collaboration between companies and research institutes in Wetsus results in innovations that contribute significantly to the solution of the global water problems. Innovation, partnership, joy, cooperation and reliability are the values around which all Wetsus' activities are organized and performed. Wetsus acts as Technological Top Institute for Water technology and is located in Leeuwarden, The Netherlands. Wetsus' scientific research program is defined by the private and public water sector and conducted by leading universities.	The research is characterized by the multidisciplinary nature of the cooperation of various research institutes and the participating companies. Wetsus combines the scientific excellence and the commercial relevance of its partners in order to create innovative research in the field of sustainable water technology. Sustainable technology for the treatment and production of water is developed from the interface of separation technology and biotechnology, e.g. crystallization, membrane technology, adsorption, electrochemistry and bioconversions are inter-related in the program. The scientific research program is defined by the private and public water sector and divided into the four major clusters defined in the Dutch Innovation Program on Water Technology. The clusters are further divided into program committees or research themes: • Clean water technology • Waste water technology • Sensor technology for water applications • Interaction of water with the environment

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
KWR Kiwa Watercycle Research	http://www.kwrwater.nl/index.asp	With its extensive history in drinking water research and its sights set on current and future water problems, KWR (previously Kiwa Water Research) has extended its field of activities to include the entire watercycle. KWR helps the water sector to identify the challenges it faces, and offers it the means and innovative strategies to meet these challenges successfully. Thanks to their extensive national and international knowledge networks, and to the development of applicable scientific insights, they act as bridge-builders between science, business and society. In this way, KWR makes top knowledge available to the whole water sector – so that we can continue to have a relationship with water that is healthy, sustainable, advanced and efficient.	As an independent research institute, KWR has formulated its own research programme in consultation with the water sector. This programme identifies the different aspects of dealing with water within the entire watercycle, whenever possible working together with other leading research institutes and partners. In this way we create added value for our shareholders and clients, and put them in a position of being able to fulfil our collaborative social assignment. Healthy water, sustainable water, advanced water and efficient water are the central themes of this research programme. • Healthy water • Sustainable water • Advanced water • Efficient water

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RIONED	http://www.riool.net/riool/pages/showPage.do?instanceid=31&itemid=233&style=default	RIONED foundation is the platform for sewerage care in the Netherlands. In RIONED all parties involved in the drainage participate: governments (federal, provinces and water boards), companies (suppliers, consultants, inspection companies and contractors) and educational institutions. The main task of RIONED is providing knowledge to the professionals . This does RIONED through research, bringing together existing knowledge and in many ways inform and bring together professionals. RIONED identifies problems in the daily practice of the sewer manager and this card with administrators and policymakers. RIONED Foundation also informs the general public.	All research is organized around projects. Foundation RIONED distinct projects under its responsibility and projects in which RIONED (including financing) participates. Projects are grouped into three program lines: ▪ Effective management ▪ Dirt/water ejection and water quality ▪ Operate in extreme precipitation
Waterdienst/Water Service	http://www.rijkswaterstaat.nl/over_ons/adressen_en_diensten/landelijkediensten/waterdienst/	The Water Service is one of five national departments of Rijkswaterstaat . The Water Department operates within the directorate by the deployment of knowledge and expertise with a reliable, clean and safe water main in the Netherlands. The consultants and project managers of the Water Service are actively involved in both rural and regional projects and provide knowledge and expertise for the water projects of Rijkswaterstaat. The Water Service has a bridging role between policy, management, implementation, monitoring and knowledge in water.	No specific research agenda available

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The National Institute for Public Health and the Environment (RIVM)	http://www.rivm.nl/en/foodnutritionandwater/drinkingwater/	Since health risks and environmental issues are cross-border by nature, international collaboration will be required if health and environmental threats are to be effectively reduced and issues dealt with. The National Institute for Public Health and the Environment (RIVM) collaborates in international projects related to public health and the environment by sharing its expertise and research findings. RIVM experts and researchers engage in collaborative research projects, and participate in advisory and expert panels. Of course an important part of the international collaboration takes place in the European context, but RIVM also has close ties with specialised agencies of the UN, such as WHO, FAO, UNEP and IAEA. Such centres as the European Reference Lab and the WHO Collaborative Center are housed at the RIVM, and bilateral cooperation takes place with relevant institutions in the USA and Canada.	Drinking water is essential to life. This is why water must also be of good quality if public health is to be maintained. This makes clean water sources and a reliable water-supply system indispensable. And this is where RIVM in the Netherlands plays a significant role by determining quality standards for drinking water, risks of contamination, and malicious and other disruptions in the drinking-water supply. No specific research agenda available

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Deltares	http://www.deltares.nl/en/knowledge-and-innovation	Deltares is a Dutch independent research institute for water, soil and subsurface issues. They work on innovative solutions that make life in deltas, coastal areas and river basins safe, clean and sustainable. They conduct research and provide specialist advisory services for government authorities and the corporate sector in the Netherlands and globally. The essence of the work is on the development, application and sharing of knowledge. Deltares developed knowledge in partnerships with universities, other knowledge institutions and the business sector, not only in government research programmes but also in contract research.	Deltares will develop the roles into a balanced mix, enabling a response optimally attuned to different requirements of different stakeholders at different times. The roles in combination provide essential added-value to our stakeholders, and are the pillars in defining strategic targets and operational plans. The roles mutually reinforce each other, and together they cover all stages of the innovation cycle: from developing and acquiring new scientific knowledge to valorisation and validation of new knowledge and models in real world projects. The following research fields are identified by Deltares ▪ Water safety ▪ Healthy soil and water systems ▪ Availability of water and soil systems ▪ Living and building in the Delta ▪ Integrated area

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STOWA	http://www.stowa.nl/Thema_s/index.aspx	The Foundation for Applied Water Research (STOWA) is the knowledge institute fo regional water management in the Netherlands. STOWA develops, gathers and disseminates knowledge needed to face the challenges that water managers need to perform well. Think of climate adaptation, a good implementation of the WFD and secure regional water. The knowledge can be applied to technical, scientific, administrative, legal and social science fields. The foundation coordinates and commissions research on behalf of a large number of local water administrations. The bodies which contribute to the STOWA are the water boards, the provinces and the Ministry of Transport, Public Works and Water Management.	STOWA provides water managers with scientific knowledge and practical instruments they require for carrying out their jobs sufficiently. The STOWA projects cover the following fields: collection, transport and treatment of waste water; management of the quality and quantity of surface and ground water; urban water management; prevention against flooding and maintenance of water barriers. STOWA has a keen eye on developments in and around the regional water management. Together with their members and partners they define current issues. The following research fields are identified by STOWA ▪ Water & Energy ▪ Cyanobacteria ▪ Water Mosaic ▪ Fish friendly ground ▪ Manual Hydrobiology ▪ Flora and Fauna ▪ WFD ▪ N2O and wastewater ▪ New Sanitation ▪ Algae and waste water ▪ Ecological Assessment ▪ Blue services ▪ Exotics (and species) ▪ Monitoring of new substances ▪ Dutch Platform for Water Environmentalists

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CYPRUS			
Ministry of Agriculture natural resources and environment	www.cyprus.gov.cy/moa/Agriculture.nsf/index_en/index_en?OpenDocument	The Ministry of Agriculture, Natural Resources and Environment is the official body of the Government in the fields of Agriculture, Livestock, Natural Resources and Environment. Currently the Department consists of 11 Departments and Agencies. The departments and agencies of the Ministry are: Agriculture sector * Department of Agriculture * Department of Forestry * Agricultural Research Institute * Geological Survey * Department of Agrarian Reform * Department of Veterinary Services Area of Natural resources * School of Fisheries and Marine Research * Water Development Department * Meteorological Office * Mining Service	The responsibilities of the Ministry are to establish and implement specific projects and programs aimed at the development of the sector and address specific problems encountered in the areas that's under its responsibilities.

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Ministry of commerce industry and tourism	www.mcit.gov.cy/mcit/mcit.nsf/dmlindex_en/dmlindex_en	The Ministry of Commerce, Industry and Tourism is responsible for the formulation and implementation of Government policy on matters pertaining to trade, industry, tourism and Consumer, in such a way that it will contribute positively towards the further development of the Cyprus economy and the well-being of the population of the island. The administration of the Ministry handles the general policy and directs and co-ordinates all the departments and services of the Ministry for its effective implementation.	The tourism sector is one of the three most important sectors with regards to water consumption in Cyprus.
Water development Department	www.moa.gov.cy/moa/wdd/Wdd.nsf/index_en/index_en?OpenDocument	The Water Development Department is responsible for implementing the water policy of the Ministry of Agriculture, Natural Resources and Environment. Main objective of this policy is the rational development and management of the water resources of Cyprus.	The responsibilities of the department cover a wide and diverse spectrum, which includes: a) the collection, processing and classification of hydrological, hydrogeological, geotechnical and other data necessary for the study, maintenance and safety of the water development works, b) the study, design, construction, operation and maintenance of works, such as dams, ponds, irrigation, domestic water supply and sewerage schemes, water treatment works, sewage treatment and desalination plants, and c) the protection of the water resources from pollution.
Environmental Department	www.cyprus.gov.cy/moa/Agriculture.nsf/environment_gr/environment_gr?OpenDocument	The Environment Department is part of the Ministry of Agriculture and Natural Resources and Environment and its responsibilities are to advise on the environmental policy and to coordinate programs for the environment.	Various European research programmes are been carried out in Cyprus and the Environmental Department participates in them.
Cyprus Statistical Service	www.mof.gov.cy/mof/cystat/statistics.nsf/history_en/history_en?OpenDocument	The Statistical Service is the competent authority responsible for the compilation and the publication of most of the official statistical data in Cyprus	No specific research agenda available.

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Cyprus Tourism Organisation	www.visitcyprus.biz/wps/portal/b2b	The Cyprus Tourism Organization (CTO) was established and operates according to the provisions of the Cyprus Tourism Organization Law of 1969–2005 and the related Regulation on Structure and Terms of Employment and Administration and Finance.	The Organisation's objective according to the law is to organize and promote Tourism within the Republic by using all possibilities and resources available. Also, the Cyprus Tourism Organization participates in tourism development programmes and conducts researches and surveys related to the Cyprus Tourism Product.
Meteorological Service	www.cyprus.gov.cy/moa/Agriculture.nsf/All/8935A47DAB146281C2256FF100395D0A?OpenDocument	The meteorological Service is a Government Department under the Ministry of Agriculture, Natural Resources and Environment, having all the normal responsibilities of a national Meteorological Service.	The main fields of activity and the principal functions of the Meteorological Service are the following: * Operation of a network of meteorological stations for the collection of data required for application purposes. * Issue of regular weather of forecasts and dissemination of these forecasts to the general public through the mass information media. * Provision of meteorological services, weather forecasts, warnings and other information, for the needs of civil aviation. * Issue of weather forecasts and warnings for shipping and other marine activities in the sea area around Cyprus. * Processing, classification and publication of meteorological data. * Publication of reports on weather and climate and supply of meteorological information and consultative services for the needs of the Cyprus community and in particular for applications to agriculture, conservation and management of water resources, engineering studies and constructions, tourism and industry, renewable energy sources, environmental studies.
Commissioner for the Environment (Charalambos Theopemptou)	http://theopemptou.com/portal/	The European Commission of Cyprus is dealing with issues like waste, pollution and air and water quality, as well as issues such as biodiversity or ways in which the economy could become more environmentally friendly, or "greener".	No specific research agenda available.

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Agricultural Research Institute (ARI)	www.cyprus.gov.cy/moa/agriculture.nsf/All/4949A1FEBC6BF423C2256FF800290B8B?OpenDocument	The Agricultural Research Institute (ARI) conducts applied and basic research, with the objective to increase yield and improve quality of agricultural production by methods that are environmentally and socially acceptable.	The research activities of the Institute cover the following disciplines: Fruit Trees and Viticulture, Plant Improvement, Vegetables and Ornamentals, Plant Protection, Soils, Water Use and Environment, Animal Production and Statistics and Agricultural Economics. ARI has a Central Chemistry Laboratory, other well-equipped specialized laboratories and research facilities, and a Library. The Institute houses the National Herbarium and the National Gene Bank. The ARI experimental station at Athalassa, maintains units of livestock and carries out work on plant breeding and improvement. There are also experimental stations at Acheleia and Zygi for citrus, sub-tropical plants and vegetables, at Saitta for deciduous trees and at Xylotymbou and Polis Chrysochous for cereals. In addition, experiments are conducted in farmers' fields in various regions.
Cyprus International Institute (CII) for the Environment and Public Health	www.hsph.harvard.edu/cyprus/	The Harvard School of Public Health (HSPH) and the government of Cyprus have established an international research, education, and technology initiative for the environment and public health to address key environmental issues in Cyprus and the Mediterranean region. Towards this end, two new research and training entities have been created: The Cyprus International Institute (CII) for the Environment and Public Health located in Limassol, Cyprus, and the HSPH-Cyprus Program (HCP) located in Boston, Massachusetts, USA.	The CII's academic activities include: (i) research, teaching and training, (ii) creating new technologies related to the environmental and public health for potential use and development by industries (iii) Bringing together distinguished educators, researchers and practitioners to confront a wide range of environmental and public health concerns facing the Republic of Cyprus and countries in the Region, and (iv) Providing academic programmes to students, researchers and other scholars in the Republic of Cyprus and the Region.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Frederick Institute Of Technology (Nature Conservation Unit)	www.fit.ac.cy/	Frederick Institute of Technology (FIT) is an energetic and vibrant higher educational institution. It is registered with the ministry of education and is one of the largest private institutions in the Republic of Cyprus.	Various research programmes are carried out by the Frederick Institute Of Technology that could provide useful information for the Innowater programme.
Cyprus University of Technology	www.cut.ac.cy/	The Cyprus University of Technology was founded by law on December 2003 and welcomed its first students on September 2007. The Cyprus University of Technology is based at the city of Limassol, where four out of five faculties are located.	Various research programmes are carried out by the Cyprus University of Technology that could provide useful information for the Innowater programme.
University of Cyprus	www.ucy.ac.cy/	The University of Cyprus was established in 1989 and admitted its first students in 1992. The main objectives of the University are twofold: the promotion of scholarship and education through teaching and research, and the enhancement of the cultural, social and economic development of Cyprus Research is promoted and funded in all departments for its contribution to scholarship in general and for its local and international applications.	Various research programmes are carried out by the University of Cyprus that could provide useful information for the Innowater programme.
Sewerage Boards in Cyprus	http://www.sbla.com.cy/article.php?id=1 Sewerage board of Limassol - Amathus	The Sewerage Board are public utility organisation established by the Council of Ministers Order 248/80 in accordance with the provisions of the Sewerage Systems Law 1971 - 2007.	No specific research agenda available. The cornerstone of their mission is the construction, operation and maintenance of the central sewerage system for the collection and treatment of municipal wastewater, as well as the construction of the basic infrastructure of the stormwater drainage system.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Water Boards in Cyprus	i.e. http://www.wbl.com.cy/english/index.php (Limassol's Water Board)	The Water Boards are a public utility. They were established and have been operating under the Water Supply (Municipal and Other Areas) Law, cap 350.	No specific research agenda available. Although, the knowledge and data from their work could benefit the Innowater programme a lot. The Board's main objective is to provide sufficient and good quality water, at the lowest possible price to meet the domestic and industrial needs of its consumers. The objectives of the Board are accomplished by: a) planning and execution of development projects, b) maintenance of the water distribution network, c) the determination of water rates in order to finance the operating expenses and development projects of the Board, while remaining a non-profit making organisation.
DENMARK			
Aalborg University Department of Biotechnology, Chemistry and Environmental Engineering	www.bio.aau.dk	The department is recognized internationally for its research and education within municipal and urban water.	▪ Among the forerunners in relation to water treatment technologies, especially the microorganisms involved in water treatment. ▪ Processes in sewers ▪ Treatment of rainwater ▪ Separation/flocculation ▪ Currently part of a number of both Danish and EU projects such as MEMBIO, a consortia between Danish companies, DHI, Technological Institute and AAU on the application of membrane bioreactors in the industry.

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Aalborg University Department of civil engineering	www.civil.aau.dk	The department is among the forerunners in the use of computational fluid dynamics for use in water treatment.	• Optimization of design of membrane bioreactors by CFD modeling • Modeling water movements in treatment systems. • Particle movements in recirculated aquaculture.
DTU Environment Department of Environmental Engineering	www.env.dtu.dk	DTU Environment is recognized internationally for its research, education and training within areas related to the environment. DTU environment is one of the largest university departments specializing in environmental engineering in Europe.	• Water Resource Engineering • Urban Water Engineering • Residual Resource Engineering • Environmental Chemistry & Microbiology
DTU Chemical Engineering	www.kt.dtu.dk	DTU Chemical Engineering has it focus on traditional unit operations like distillation and filtration but are also involved in enzyme research. These processes are all related to treatment technologies.	▪ Development of new technologies for membrane treatment ▪ Application of enzymes in water treatment ▪ Physic/chemical treatment technologies.
DHI	www.dhigroup.com	DHI is an independent, international consulting and research organization. DHIs objectives are to advance technological development and competence within the fields of water and environment. DHI is self-owned and a non-profit institution. DHI is a GTS institute (Advanced Technology Group). GTS is a grouping of independent Danish research and technology organizations.	▪ Monitoring of treatment systems ▪ Process development and optimization ▪ Characterization of biological treatment systems ▪ Hydraulic modeling of sewer systems Currently part of a large number of Danish and international projects, such as: • MEMBIO, a consortia on membrane bioreactors • AQUAFIT, a EU consortia on reduction of water use in the industry • Only Water, development of container based water treatment units.

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Danish Technological Institute	www.teknologisk.dk	The Danish Technological Institute is a self-owned and non-profit institution who develops, apply and disseminate research- and technologically-based knowledge for the Danish and International business sectors. DTI is a GTS institute (Advanced Technology Group).	DTI has its focus on two areas: • Analysis of microbiology in treatment systems • Optimization of separation DTI is focused on the application of novel microbial detection techniques, such as FISH, PCR and DGGE, in relation to modern treatment facilities.
University of Århus, Department of Biological Sciences	www.biology.au.dk	Department of biology focuses on application of molecular microbiology in water, especially new techniques for detection of bacteria in drinking water.	• Detection of faecal pollution of drinking water • Fast detection of bacteria
University of Southern Denmark, Institute of Biology	www.sdu.dk	The institute mainly focused on simple water treatment technologies for developing countries.	• Application of mangrove for water treatment • Simple water treatment in developing countries
University of Southern Denmark, Institute of chemical engineering, biotechnology and environmental technology	www.sdu.dk	The institute has two main areas within water treatment. The first is Life Cycle Analysis, whereas the second is the separation technologies	• Environmentally efficient technologies • Life cycle analysis • Sludge dewatering • Characterization of sludge and waste water
National Environmental Research Institute	www.dmu.dk	NERI mainly focused on monitoring the current state of the environment, but are also involved in the development of new techniques	• Research on water treatment in aquaculture Currently part of a large project on implementation of recirculated aquaculture in Denmark.
University of Copenhagen, Faculty of Life Sciences	www.life.ku.dk	KU Life covers all aspect of life sciences, and is therefore involved in a number of projects concerning water.	• Treatment of urban water applying simple measures • Treatment of water from aquaculture

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Agrotech	www.agrotech.dk	AgroTech is an authorised technological service institute (GTS) which offers impartial consultancy and provides technological services based on the latest knowledge.The main field of expertise cover agriculture and food.	▪ Water in the food and agriculture industry ▪ Separation of manure ▪ Bioenergy
SPAIN			
ADECAGUA	http://www.adecagua.es/	Association for the protection of water quality. Adecagua is an Spanish association created in 1967, a member of the Water Environment Federation (WEF) and the EUROPEAN WATER ASSOCIATION (EWA). Its goal is the technical collaboration between all the water, share expertise and benefit society in protecting and improving the environment worldwide.	Wastewater Treatment and Reuse Conference - Legislation. Legal information which sets out the main laws related to water sector and the environment. - Water and Technology. Information technologies to manage and improve the quality of water. - State ecological / Limnology. Information on biological aspects of inland surface - Procedures with the administration. Links to facilitate the various formalities with the authorities with competence and control management and water quality. - Water News

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
IMDEA AGUA , UHA Instituto Madrileño de Estudios Avanzados (Madrid Institute of Advanced Studies)	http://www.imdea.org/ contacto.agua@imdea.org Telef: 91 830 59 62	IMDEA seeks to promote R + D + I and its transfer to society, to develop cutting-edge science and technology and competitive internationally. The Institute serves as a catalyst for interdisciplinary research, combining the experience and the ability of a wide range of disciplines, such as scientific, natural resource engineering or politics. Our research focuses on scientific and social aspects of water (demand and supply, quality and quantity, physical, chemical and biological)	The Institute's scientific program is based on developing four basic strategic lines for the integrated management of water: 1**. Sustainable management of water bodies** 2**. Management and regulation of direct and diffuse pollution** 3. **Treatment and water reuse** 3.1.*Drinking water* Improving the conventional treatment process Innovative processes of water treatment Disinfection byproducts and disinfection management Incidence and elimination of trace Management of aesthetic quality (sensory) of drinking water Management of water treatment wastes (liquid and sludge) Operation and optimization of treatment plants, drinking water Management and maintenance of water supply networks Management of drinking water and sanitation in emergencies *3.2. Treatment of urban and industrial wastewater* Advanced technology and biological processes Technology and advanced physical and chemical processes Incidence and disposal of hazardous substances in waste water Conventional process improvement Sludge and Biosolids Management Elimination of odors and volatile emissions Modeling processes of wastewater treatment Operation and optimization of treatment plants, sewage Reuse and rehabilitation of wastewater 4. **Economic and institutional analysis Water**

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INFRAECO,S.A.	http://www.infraeco.es/ Telef: 91 302 49 02	INFRASTRUCTURE & Ecology is a company with extensive experience in engineering studies and environmental projects and a continuing desire to be at the forefront of technology applied to the Environment.	**1. Water quality.** - Laboratory analysis of drinking water and wastewater. - Monitoring water quality analytical and pollutants discharged. - Maintenance of automatic control of parameters water quality. **2. Ecology and water pollution**. - Study and management of fish populations - Studies of water quality for different uses - Eutrophication of reservoirs - Studies of fish health - Establishment of corrective actions in degraded ecosystems. **3.Hydrogeology** - Regional and local hydrogeological studies - Pollution and protection of aquifers - Draft abstractions. **4.Sanitary engineering.** - Draft supply networks - Feasibility studies and planning - Projects of collectors and outfalls land - Water treatment plants and water treatment projects - Modelling and outfall studies - Studies and desalination projects.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
CTAGUA (Water Technology Centre)	http://www.cetaqua.com/ info@cetaqua.com	Water Technology Centre is an inclusive organization, manager and executor of research projects with the aim of proposing to companies, society and government innovative solutions for solving environmental and technological issues related to management of the integrated cycle water. The Technology Observatory is a project of CETaqua that aims to be the management tool, capture and dissemination of information resulting from the activities and research lines CETaqua. By Technology Observatory is channeled diffusion of information services and personalized alerts to experts CETaqua power transfer of results to businesses, government and society in general. The main steps characterizing the technology transfer are: - Integration into the same physical space agencies involved in the business world, research and teaching in the water sector - Identification of the results of the project portfolio of R + D + i, identifying the value and innovation generated - Evaluation of results of R + D + i in order to define its potential recoverable Valuation. The recovery phase is strategic and is the reason for the existence of CETaqua - Transfer. CETaqua has defined specific transfer pathways depending on the type of results recoverable: packages of knowledge or technology products	The lines of research are aimed directly at achieving a more sustainable management of water cycle, primarily from environmental component L1. **Alternative resources** Desalination of seawater and brackish water, reclaimed water reuse and rainwater and groundwater recharge. L2. **Impact of global change** Global change impacts on water cycle and the design of strategies to mitigate or adapt infrastructure. L3. **Efficient infrastructure** Technologies that "Intelligent Networks are" leak detection systems, evaluation of aging infrastructure, process modeling. L4. **Environment and health** Control technologies for biological and chemical water quality, to assess health risks and the environment. L5. **Energy and water** Research and development to improve the energy efficiency of farms and energy production from biomass and other renewable sources. L6. **Management of water demand** Knowledge of consumer behavior to respond satisfactorily to their expectations. Demand forecasting models. CETaqua leads the project UFTEC (Substitution of conventional treatment of raw river water by ultrafiltration membrane technology), focusing on assessing the efficiency of ultrafiltration as an alternative to conventional pre-treatment of river water

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Centro Tecnológico del Agua de la Universidad de Salamanca (CIDTA) (Water Technology Center at the University of Salamanca)	http://cidta.usal.es/ Juan Manuel Cachaza (Director) cidta@usal.es	The CIDTA, Center for Research and Technological Development of Water is a central characteristic of the University of Salamanca-oriented development of R & D activities in the area of Water Resources that help meet the demand for technologies, products and services capable to promote innovation and improve competitiveness. Service oriented to the production system in general and particularly to the Community of Castilla-Leon	The R&D programs to develop in the CIDT be summarized as: - **Control of Water Quality.** Bioindicators Study of water pollution Epidemiological analysis of pollution problems Ecotoxicity, cytotoxicity and mutagenicity in WWTP Dynamics of natural water pollution and water resource modeling - **Decontamination Technologies** Development of photocatalyst materials for water decontamination Bioremediation of water contaminated by heavy metals (Bioremediacción) Degradation of pollutants by supercritical water oxidation Sorption processes of metals in silicate - **Resource Management** Development of expert systems for design, control and management of WWTP Evaluation of the efficiency of water use in urban and agricultural systems Sociological analysis of needs, uses and water management Design and technical and economic feasibility of water treatment in small municipalities. - **History and culture of water**. THE CIDT leads the creation of a national research network on water resources Projects: - Technical Assistance Project for the control of a pilot plant for wastewater treatment (removal of nutrients by HYBACS systems) installed in the WWTP of Ávila (Spain) - Technical Assistance Project of tests to evaluate the effectiveness and technical efficiency of thermal hydrolysis of MSW leachate in pilot plant operating at high temperature and pressure - Technical assistance project to control industrial digester treatment plant RU Salamanca

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
ITA (formerly Water Technology Institute) of the University of Valencia	http://www.ita.upv.es/ Enrique Cabrera Marcet Director informacion @ ita.upv.es	The ITA (formerly Water Technology Institute) is a research group of the Universidad Politecnica de Valencia which focuses its R & D + i in issues related to engineering and urban water management. The ITA is formed by a group of water professionals established for over 30 years in Valencia, which originated around the Fluid Mechanics Chair of the UPV	**Hydraulic Elements** Water meters, flowmeters, valves and pipes. Instrumentation for measuring hydraulic variables. **Operation and maintenance of systems** Operation, rehabilitation and renewal of networks. Management infrastructures. Water losses. **Hydraulic transients - Hammer** Design, analysis and protection of hydraulic and hydro networks against water hammer. **Water Policy and the Environment** Policy and sustainable water management. Water and energy. Quality and contamination of air and water. **Analysis and design of hydraulic systems** Mathematical modeling of water distribution networks. Installations for water supply and drainage in buildings. **Efficient use of water** Characterization and management of urban water demand. Results and feasibility of saving measures. **Management of water services** Management indicators, benchmarking, performance evaluation of companies, ISO 24500 standards.
CNTA	www.cnta.es jlorenzo@cnta.es National Center for Food Safety and Security.	Technology Centre contributes to the development of the agrifood sector through research and technological innovation, analytical services and technical assistance to businesses.	MBR proyect food business. Waste water reuse in Food and agroalimentary sector. Water reuse in wineries.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Plataforma tecnológica Española del agua (Spanish Water Technology Platform)	http://www.infoagua.net/la-plataforma.aspx info@infoagua.net	Forum for cooperation for the promotion of R + D + i among all national scientific-technological agents, aimed at constant improvement of technologies applicable to the sustainable management of water resources in the entire water cycle. The platform guides and promotes the R & D & I sector, analyzing situations, identifying actions and advising national and European institutions. It would also promote the internationalization and Spanish participation in the international arena, and particularly Spanish companies and public institutions in programs, initiatives and projects of the European Union, the Framework Programme.	1. Net of public-private R & D + i 2. Sectoral advocacy and advice to institutions. 3. Planning and monitoring of R + D + i. 4. Supporting R & D and business development. 5. Internationalization, technology transfer and development cooperation. 6. Information, communication, sectoral promotion and media relations.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
Observatorio de la sostenibilidad en España (Sustainability Observatory in Spain)	http://www.sostenibilidad-es.org/observatorio sostenibilidad Universidad Alcalá de Henares, Madrid. Noelia Guaita (Noelia . guaita@uah.es) Pilar Alvarez-Uría (pilar. Uría@uah.es)	The Observatorio de la Sostenibilidad en España (OSE) is an independent project in operation from February of 2005, It's head office is in the University of Alcala (Alcala de Henares). It initiates its activities as a result of an agreement subscribed by the Ministry of Environment, the Foundation Biodiversity and the General Foundation of the University of Alcala. The Water and Sustainability Platform aims to ensure greater information and participation of all stakeholders in water management and the society as a whole, comes with the intention of structuring the relevant knowledge on water and sustainability mission is to disseminate and discuss new partnership between the patterns of thinking, behavior and water management	The initiatives developed in the framework of the Water and Sustainability Platform will aim to: - Assist in the shift to new management, water policy and culture. - Contribute to the dissemination of international and national experiences of success in the rational management of water. - Serve as a vehicle for exchanging ideas and experiences. - Encourage the dissemination of information and knowledge about water and its management
Estación Experimental del aula DEi perteneciente al CSIC en Zaragoza. (Aula DEI Experimental Station belonging to CSIC Zaragoza)	Estación experimental Aula Dei: Avda. Montañana 1005. Zaragoza. E-50059 España Tel: +34 976 716 100. macoan@eead.csic.es playan@eead.csic.es	Experimental Station of Aula Dei (EEAD) is an area that depends on the Institute of Agricultural Sciences of the Higher Council for Scientific Research (CSIC), public research agency of the Ministry of Science and Innovation. EEAD's mission is to contribute to agricultural materials and technologies to enhance their competitiveness and sustainability, from knowledge about the processes involved in plant production.	▪ Optimization of water use in irrigated agriculture ▪ Optimizing the design and management of irrigation and the irrigated areas. ▪ Develop agronomic techniques to optimize water use by crops and minimize the negative impact of irrigation.

INSTITUTION	ADDITIONAL INFORMATION	SHORT DESCRIPTION	WATER RESEARCH (FOCUS AND CURRENT PROJECTS)
AFRE (asociación de fabricantes de agua y riego españoles)	http://www.afre.es/ C/ Jose ortega y gasset 17 Esc. B , 6º I. Telef: 91 781 95 22	AFRE is a nonprofit association created in 1998, is the only professional organization of employers nationwide for the representation, advocacy, promotion and development of Spanish technology bound water.	▪ The International Innovation Unit UII-INNOVAAGUA is an office of R + D + i, mainly from Europe, created at the initiative of AFRE, Irrigation Association of Manufacturers Spanish, to serve the members of the Spanish Technological Platform for Water and irrigation

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