

# The Water Science Forum has a mission to promote research, education and training in all aspects of water cycle related chemical sciences

#### **Overarching objectives**

- Fostering and encouraging the growth and application of water related chemical sciences by the dissemination of chemical and scientific knowledge
- To support and develop the Water Science Forum members in their professional ability to promote and protect public health, the environment and water sustainability in terms of both quantity and quality
- Supporting the establishment, upholding and advancing the standards of qualification, competence, and conduct of those who practice the chemical sciences within the water sector
- Supporting the development and application of sound science in the development of water related measurement methods techniques
- Supporting the development and application of sound science and evidence based development of water related standards and regulation
- Serving the public interest by acting in an advisory, consultative or representative capacity in matters relating to the science and practice of chemistry in the water sector; and

#### To achieve these objectives

We will

- Organise and collaborate with others to provide authoritative conferences, seminars, and other dissemination events on topical issues
- Actively participate in the establishment of relevant operating standards, quality standards both regulatory and discretionary
- Respond to public consultation from governments and other bodies, providing expert knowledge to relevant bodies, prepare and make available briefing papers on relevant issues and, where appropriate, identify and direct enquires to other partner organisations

- Provide training and continuing professional development opportunities to aspiring and existing professional chemical scientists within the water and associated sectors
- Provide Bursaries to assist post graduate students, and professional water scientists in the early part of their water science career (including early career and returners)
- Provide the means to recognise outstanding long-term contributions by organisations and/or individuals
- Support the delivery of international water related activities

# Annual outputs (KPIs)

We will

- Be financially prudent and meet the Royal Society of Chemistry's requirements for financial management
- Organise and present, in collaboration with others, a minimum of one conference per year
- Organise and present CPD type seminars and workshops
- Respond as appropriate to consultations by the U.K. Government and the devolved administrations on matters concerning water related chemical sciences
- Respond as appropriate to consultations by the other water stakeholders on matters concerning water related chemical sciences
- Disseminate knowledge and understanding throughout the RSC and other stakeholders by way of
  - o newsletters to members and other interested stakeholders
  - o Utilisation of appropriate social media such as the MyRSC platform
  - Electronic communications such as e-mail and RSC Grapevine
  - Other ad-hoc conferences, seminars and webinar type events

## WSF recognises the challenges of sustainable water provision which

- Balances the needs of people, the environment and other land uses
- Minimises environmental impact from the abstraction and production of potable water and treatment of waste-waters
- Encourages coexistence with agriculture, aquaculture and other water users
- Effectively manages and improves water quality
- Adaptation and mitigation of climate change
- Takes into account the principles of the circular economy

### Raw water collection and catchment management

#### Water resources

Chemical science related to water resources

Surface water Ground water Grey water Black water Rainwater harvesting Quality Monitoring Contamination Marine

#### WSF plans to

Engage with land users, water users, and other legitimate stakeholders Encourage and promote research Hold seminars on catchment and raw water management

- A CPD seminar on the role of catchment management in safeguarding raw water quality, to cover
  - o Principles of integrated catchment management
  - Responsible use of pesticides
  - o Livestock management for reducing Cryptosporidium and pathogen risks
  - o The relationship between sources of nutrients and their aquatic impacts

#### Water treatment and storage



#### **Treatment and storage**

• Chemical science related to treatment and treatment technologies

- Treatment processes
- Treated and stored water

quality

- Monitoring
- Unintentional contamination
- Premeditated contamination

• Impact of distribution systems on water quality

#### WSF plans to

Engage with water undertakers, industry bodies, suppliers, end users, regulators, accreditation bodies and relevant water users

Encourage and promote cooperation and research

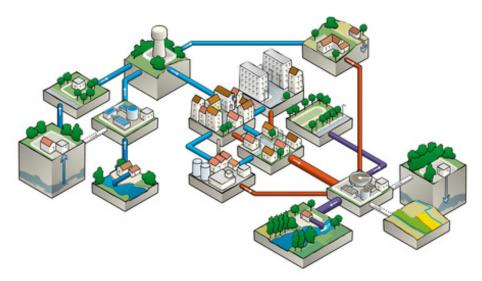
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Identify interfaces with other sciences and engineering disciplines and encourage cooperation with relevant bodies

Hold seminars on the role the chemical sciences play in the sustainable treatment and storage and delivery of potable water

Participate in the development of relevant standards and regulations

- A CPD Seminar on the sustainable treatment and storage of water
  - o Reviewing the development and implementation of drinking water safety plans
  - o Contamination risks during storage and street works
  - o Identification and risk assessing new and emerging treatment challenges
  - Improving on line and laboratory based analytical methods, particularly those aimed at contaminant identification important in emergency situations
  - o The importance of water treatment
  - o How water is treated
  - o How risk to public health is effectively managed
  - o How water is stored and distributed



#### Water Use

#### Potable Use

Chemical science of treatment and treatment technologies Quality Monitoring Unintentional contamination Premeditated contamination

#### Non-potable Use

Chemical science of treatment and treatment technologies

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Quality Monitoring Industrial use Agricultural / Aquaculture/ Land management technologies

#### WSF plans to

Engage with potable and non-potable water users and other legitimate stakeholders Encourage and promote research

Hold seminars on the role the chemical sciences play in the sustainable use of water Participate in the development of relevant standards and regulations with relevance to the circular economy

Contribute to relevant debates on the sustainable use of water

- A conference on
  - o a topical aspect of developing water regulations
- A CPD Seminar on the sustainable use of water
  - o Determining the appropriate quality of water for a given use
  - o Responsible use of water and water systems
  - Site and production management for reducing unintentional contamination of water resources and waste water treatment processes.

# Waste water collection, treatment, return to the environment and environmental fate



#### Treatment

Chemical science related to treatment and treatment technologies Waste water treatment processes Energy recovery Effluent quality Monitoring **Use** Waste water as a resource Sludge management and energy Urban diffuse pollution

#### WSF plans to

Engage with users of wastewater services, environmental regulators and other legitimate stakeholders

Encourage and promote research

Hold seminars on the role the chemical sciences play in the sustainable treatment of wastewater and the safe return of it and associated products (e.g. sludge) to the environment plus its reuse

- A conference on
  - a topical aspect of new and developing wastewater treatment technologies, processes and materials
- A CPD Seminar on
  - Waste water as a resource e.g. recovery of energy, as a source of raw materials and feed stocks
  - o Sustainable treatment of waste water and its associated by-products
  - Urban diffuse pollution
  - Improving on line and laboratory based analytical methods, particularly those aimed at real time control and management

#### **Educational and CPD activities for members**

WSF will

- Continue to maintain and where appropriate extend the Alan Tetlow memorial bursary
- Continue to maintain and where appropriate develop the water science bursary
- Support appropriate mechanisms for members progressing towards registration and chartered status
- Provide suitable prizes and rewards for water related chemical science practitioners (e.g. technicians, analysts plant operators to differentiate it from the ESED award)

Current a/c				Y1	Y2	Y3	Y4	Y5
Inflows	2014	2015	2016	2017	2018	2019	2020	2021
Opening balance			7,316.70	2,893.72	0.00	0.00	0.00	0.0
RSC Grant	5,871.00	5,910.00	2,723.00	3,723.00	3,723.00	3,723.00	3,723.00	3,723.0
Income from Events (Net)	- 4,276.87	4,203.69	6,033.70	8,000.00	8,160.00	8,323.20	8,489.66	8,659.40
Outflows								
Influencing activties	- 1,467.81	-565.95	-6,344.29	-5,142.00	-5,244.84	-5,349.74	-5,456.73	-5,565.87
Bursaries	- 2,484.01	-804.13	-1,000.00	-5,000.00	-4,000.00	-4,000.00	-4,000.00	-4,000.00
Water for Life award				-200.00	-200.00	-200.00	-200.00	-200.00
Administration	۔ 6,983.78	۔ 6,323.38	-5,835.39	-6,380.85	-6,508.47	-6,638.64	-6,771.41	-6,906.84
Surplus/Loss (Closing balance)	۔ 9,341.47	2,420.23	-4,422.98	-4,999.85	-4,070.31	-4,142.17	-4,215.48	-4,290.25
Closing balance			2,893.72	-2,106.13	-4,070.31	-4,142.17	-4,215.48	-4,290.25
Deposit a/c								
Opening reserves in Deposit a/c			48,474.98	48,842.53	47,106.73	43,393.60	39,580.44	35 <i>,</i> 665.07
Interest			367.55	370.33	357.17	329.02	300.11	270.42
				-2,106.13	-4,070.31	-4,142.17	-4,215.48	-4,290.2
Closing reserves in Deposit a/c			48,842.53	47,106.73	43,393.60	39,580.44	35,665.07	31,645.2

#### Assumptions

Annual rate of inflation Deposit a/c interest rate



85% of monies in deposit a/c

Admin, Influencing, Events Income calculated as mean of previous 3 years for Y1

Bursaries maintained at current cash amount

RSC Grant maintained at current cash amount

Assumes that year end losses are funded from reserves