



UK Science & Innovation Network Country Snapshot: United Arab Emirates (UAE)

Science and Innovation Landscape in the UAE

(Global Innovation Index rankings from GII 2019, University rankings QS2020)

The **UAE** is a constitutional federation of seven emirates with Abu Dhabi as the capital city and a <u>total</u> <u>population</u> of 9.6million in 2018. There are <u>more than 200 nationalities living and working</u> in the UAE. The UAE is the 2nd largest Gulf economy, and the 30th largest in the world. According to the <u>Annual Economic</u> <u>Report 2019</u>, GDP was AED 1,521.1 billion (approx. 414.1bn USD) in 2018. The award of <u>EXPO 2020</u> to Dubai (now taking place in **2021-2022**) is forecast to <u>boost the economy</u> by USD 23 billion, resulting in about USD 8 billion worth of opportunities across many sectors. The UAE is ranked 16th in the World Bank's <u>ease of doing business</u> overall ranking, but first in the Middle East and North Africa (MENA) region, holds the 25th position globally in <u>Global Competitiveness Report 2019</u> by World Economic Forum and is an entry route into other <u>Gulf Cooperation Council</u> (GCC) countries. In addition, it stands out as one of the 10 largest donor states in <u>official development aid</u> (ODA).

The UAE has had the vision and objective of transforming its economy traditionally based on oil production to a more diversified and sustainable economy with an important component based on R&D, technology, knowledge and innovation. Today, the UAE benefits from a **growing research environment** that has a **strong infrastructure**, a multitude of **academic institutions**, and many foreign and national researchers. This is evident by recent statistics: the UAE is a **successful higher education hub**, hosting one the largest number of international branch campuses in the world (31 international, incl. 13 UK providers); the UAE leads Arab Countries in relation to **innovation**; and the **UAE universities rank among the**



world's best according to the Times Higher Education World University Rankings 2019.

Innovation in the UAE has become a working approach. Research ambitions are detailed in key UAE national and emirate level economic plans, including: the UAE Vision 2021; the UAE National Strategy for Advanced Innovation; National Advanced Sciences Agenda 2031; UAE Strategy for the Future; and the UAE Centennial 2071. The UAE already demonstrates very high rates of international research collaboration and it is expected that the volume and intensity of research collaboration in the UAE will increase in the medium to long-term (UUKi, 2017). Furthermore, between 2014 and 2018 the UAE increased its R&D expenditure from 0.5 to 1% of GDP; and is expected to reach 1.5% by 2021 in line with national targets detailed in the UAE Vision 2021 National Agenda. Among the strategies adopted by the UAE to enhance in the development of innovation is the endorsement of public-private partnerships across the UAE as well as the establishment of a number of innovation incubators, accelerators and free zones.

The UAE is also becoming a prominent leader in certain priority areas. The UAE became the first country worldwide to appoint a **Minister of State for Artificial Intelligence** (and launch a **National Strategy for Artificial Intelligence**) in 2017 as well as a Minister of State for **Happiness** (and and launched the National Programme for Happiness and Positivity) in 2016. In January 2017, the UAE announced the

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Energy Strategy for 2050 to increase the contribution of clean energy to 50 percent by 2050, and to increase consumption efficiency of individuals and corporates by 40 percent. In March 2017, the UAE launched a **Cyber Security Strategy** that aims to strengthen the position of the UAE as a world leader in innovation, safety and security.

The UAE, through the Ministry of Advanced Sciences and the delivery of the National Advanced Sciences Agenda 2031, is focusing on **8 scientific priorities**: 1) Developing arid and urban **food science and systems**; 2) Pursuing cleaner **water solutions**; 3) Fostering **sustainable energy**; 4) Optimising the **UAE's natural resources** and their applications; 5) Developing an integrated **industrial complex**; 6) Designing **logistics analytics**; 7) Evolving to **adaptive manufacturing**; 8) Preventing and treating UAE's top **health challenges**.

UK-UAE Collaboration in Science and Innovation



The UK and the UAE have a shared agenda in many areas of political and practical co-operation, borne of many years of collaboration since before the United Arab Emirates was formed. Find out more news on our <u>UK and United Arab Emirates news page</u>. Current key facts: the UAE is the UK's 13th largest export market; over 5,000 UK companies are doing business in the UAE; the majority of the UAE population is made up of expatriates, with 120,000 UK residents; the British curriculum is the most popular in Dubai and among the top three in Abu Dhabi; the UK has the largest representation of Universities in the UAE and is the UAE's second largest research partner.

Many new collaborations in science and innovation are driven by either **existing relationships; trust and historic partnerships or by government to government initiatives**. Given that the UAE is a non-ODA country, funding opportunities must be identified through individual industry, government or academic stakeholders. In light of this, some funding support has been obtained from the UK Government to seed bilateral activity. **SIN UAE supports the delivery of the UK International Research and Innovation Strategy** as well as support to key international committments such as the **Paris Agreement on Climate Change. SIN UAE actively works** with the below key stakeholders to advance bilateral opportunities in **6 key sectors**: 1) **Artificial Intelligence**; 2) **Health and Life Sciences**; 3) **Food Security**; 4) **Smart Cities**; 5) **Energy**; 6) **Oceans and the Environment** (incl. **Climate Change**). In addition, we are supporting science and innovation content at the **EXPO 2020 UK Pavilion**.

Local government stakeholders include: Environment Agency Adu Dhabi; Ministry of Advanced Sciences, and Ministry for Artificial Intelligence; Ministry of Climate Change and the Environment; Ministry of Energy and Industry; Ministry of Education; Ministry of Food Security. University stakeholders include: Abu Dhabi University; American University of Sharjah; Heriot Watt University Dubai; Khalifa University; RIT Dubai, UAE University; University of Birmingham; University of Sharjah. Wider stakeholders include: Al Qasimi Foundation; Azraq; Global Green Growth Institute; HSBC Sustainability; International Centre for Biosaline Agriculture; IRENA; Microsoft; Sandooq Al Watan; Smart Dubai.



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SIN in UAE - Recent Success Stories

SIN UAE, in collaboration with the Department for International Trade and the Expo team, has delivered a variety of events in partnership with local stakeholders as well as developed bilateral relations to promote UK-UAE collaboration in Science and Innovation. Some **success stories** are shown below.

- The UK's Centre for the Environment, Fisheries and Aquaculture Science (CEFAS) was awarded funding for the first time by HSBC Sustainability to carry out a <u>climate change project involving a</u> <u>vulnerability assessment of Oman's fisheries and aquaculture sector</u>.
- SIN UAE deliverd the first UK-UAE Research Forum on Artificial Intelligence which was held on the 2nd May, 2019 on the side-lines of the first UAE's AI Everything event. The event was organized under the patronage of His Excellency the UAE Minister of State for Artificial Intelligence, Omar Sultan Al Olama, hosted by Heriot Watt University Dubai, with support from the British Council and comprised 20 inspirational Al talks as well as 100 guests.
- The UK Government **Department for Business Energy and Industrial Strategy (BEIS)** and the **UAE Ministry for Energy and Industry agree to bilateral cooperation in energy**. Since signing the MOU in 2017, BEIS has visited the UAE & bilateral projects are underway.
- The UK Government Centre for Environment Fisheries and Aquaculture Science (Cefas) and the UAE Ministry for Climate Change and the Environment (MOCCAE) agree to scientific cooperation in a number of

areas, including **marine biodiversity and monitoring**; **fisheries and aquaculture.** Since signing the MoU in 2017, the two parties have held various workshops, visits and are advancing scientific projects in relation to **food security and aquaculture.**

- SIN supported the **UAE Space Research for Food & Water Security on Earth Conference** which was held in Nov, 2019 and led by Dubai Future Foundation. The event showcased the leading research by the University of Edinburgh and opened up UK relations with the **Mohammed Bin Rashid Space Centre.**
- SIN supported the Global Forum on Innovations for Marginal Environments Conference which was held in Nov, 2019 and led by International Centre for Biosaline Agriculture. The event comprised UK speakers as well as meetings to foster food security partnerships.
- SIN UAE, in collaboration with the Economist, led the UK Government input to the World Ocean Summit in Adu Dhabi, March 2019. Activities included the securement of UK speakers, bilateral meetings and a workshop "Catalyzing ccordinated action to address selected human impacts on the coastal and marine ecosystems of the arabian Gulf", in collaboration with the EAD, the Abu Dhabi Global Environmental Data Initiative and Cefas.
- SIN UAE supported two events in partnership with **Dr Jane Goodall** and the **Roots n Shoot UAE Programme** in Jan, 2019 and Feb, 2020. The events comprised a closed panel discussion to raise awareness for

environmental issues as well as a reception with leading environmental stakeholders.

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