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الهيئة الوطنية للبحث العلمي

# **Introduction to the National Research Foundation UAE**

**Presentation to  
CAA accredited Institutions**

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# Introduction

- ① **Welcome**
- ① **Introduction to NRF**
- ① **UAE research performance**
- ① **NRF and the Federal Institutions**
- ① **NRF and CAA Accredited Institutions**
- ① **NRF and industry-based research**
- ① **NRF and other funding agencies**
- ① **Questions**



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# Vision

- **To support world-class research activities, and create an internationally competitive research environment and innovation system in the United Arab Emirates.**



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# Mission

- **To build an internationally competitive research capacity for the economic and social development of the United Arab Emirates**



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# **NRF will**

- ① **Fund research activity consistent with national priorities;**
- ① **Boost research performance and create world-class research Centers in the country;**
- ① **Encourage collaborative research activity between public and private universities, and industry;**
- ① **Create new knowledge that leads to economic and social benefits in the UAE;**
- ① **Facilitate the transfer of knowledge into economic and social activity;**
- ① **Improve the UAE's international benchmarking on Research and Development.**



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# Guiding Principles

- ***Excellence:*** support high-quality and innovative research that is locally relevant and internationally recognized.
- ***Strategic direction:*** support research in areas of national priority that delivers the greatest benefits to the UAE.
- ***Accountability:*** use transparent processes consistent with international best-practice.
- ***Partnership:*** Encourage partnerships among universities, research institutes and centers, government, and industry at the local, national, and international level.



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# **NRF at a glance**

- **Small organization; focused and flexible;**
- **Providing research leadership and advice;**
- **Investing in research in UAE universities;**
- **Facilitating research networks & partnerships;**
- **Helping to build an innovation culture;**
- **Assisting industry and commerce grow its research activities;**
- **Raising awareness of the importance of research;**



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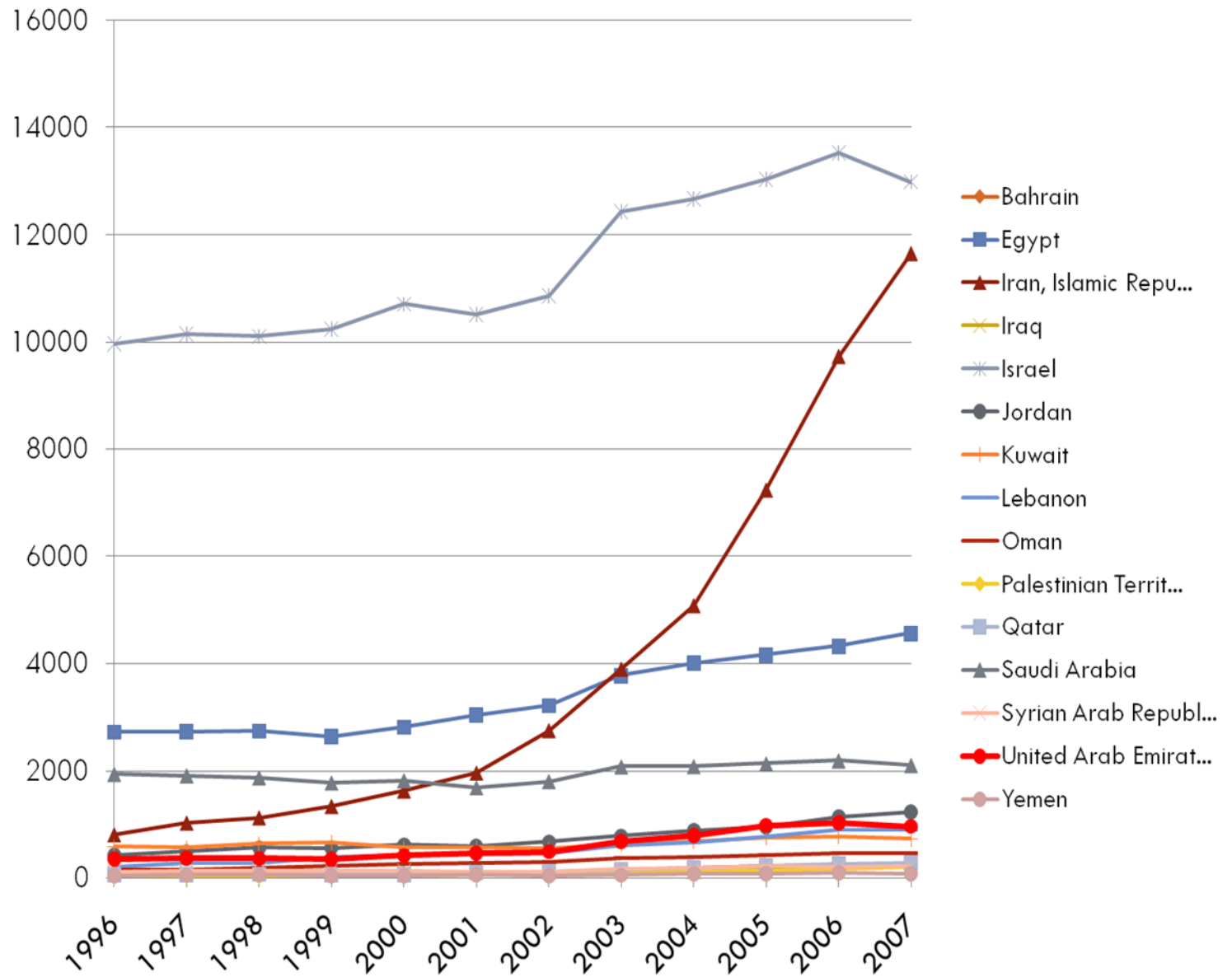
# UAE Research Performance

- The United Arab Emirates is the 66th ranked producer of scientific publications in the world, but 87th in publication impact as measured by the h-index.
- UAE experienced steady growth in output through 2005, but its share of global and regional output is now in decline. UAE has not matched the exceptional growth experienced in Iran or Egypt.

Indicator	Value	Global Rank	Regional Rank
Publications	7202	66	7
h-index	44	87	7



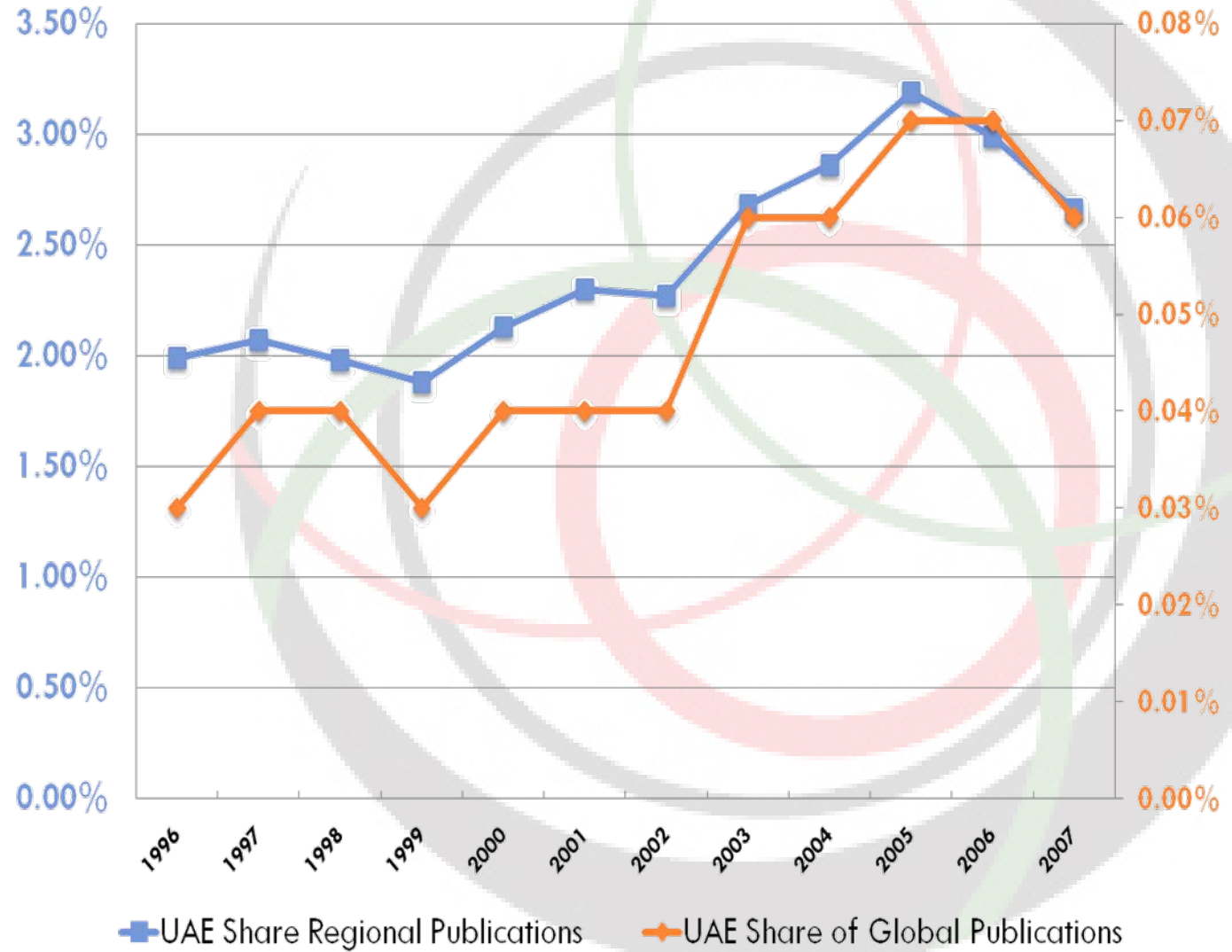
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## UAE Scientific Publications as Share of Global and Regional Output (1996-2007)



Field	Number of Publications 1996-2006	Field share of UAE Publications	Field share of Global Publications	Activity Index
Medicine	1998	27.74%	28.64%	0.97
Engineering	1430	19.86%	16.06%	1.24
Biochemistry, Genetics and Molecular Biology	802	11.14%	12.89%	0.86
Computer Science	588	8.16%	4.80%	1.70
Agricultural and Biological Sciences	551	7.65%	7.01%	1.09
Mathematics	540	7.50%	3.83%	1.96
Physics and Astronomy	448	6.22%	10.98%	0.57
Earth and Planetary Sciences	410	5.69%	4.53%	1.26
Environmental Science	407	5.65%	4.09%	1.38
Chemical Engineering	393	5.46%	4.40%	1.24
Chemistry	359	4.98%	7.45%	0.67
Materials Science	333	4.62%	7.40%	0.63
Social Sciences	316	4.39%	4.21%	1.04
Pharmacology, Toxicology and Pharmaceutics	308	4.28%	3.94%	1.09
Energy	303	4.21%	1.87%	2.25
Immunology and Microbiology	271	3.76%	3.69%	1.02
Veterinary	256	3.55%	1.05%	3.40
Neuroscience	225	3.12%	3.10%	1.01
Business, Management and Accounting	166	2.30%	1.95%	1.18
Psychology	112	1.56%	2.02%	0.77
Decision Sciences	96	1.33%	0.50%	2.69
Economics, Econometrics and Finance	93	1.29%	1.00%	1.30

University	Publications 2000-2006	Average Impact	Top Fields
<b>United Arab Emirates University</b>	1758	3.41	Biochemistry & Molecular Biology Engineering, Chemical Cell Biology, Obstetrics & Gynecology, Pediatrics
<b>American University of Sharjah</b>	252	1.88	Engineering, Electrical & Electronic Mathematics, Applied Computer Science, Interdisciplinary
<b>University of Sharjah</b>	197	2.37	Engineering, Electrical & Electronic Mathematics, Applied Mathematics
<b>Tawam Hosp</b>	161	2.69	Medicine, General & Internal Pediatrics Surgery
<b>Mafraq Hosp</b>	68	1.65	Radiology, Nuclear Medicine & Medical Imaging Rheumatology Ophthalmology
<b>Khalifa University (Etisalat College)</b>	67	3.75	Mathematics, Applied Engineering, Electrical & Electronic Mathematics
<b>Central Vet Research Lab</b>	65	4.26	Veterinary Sciences Reproductive Biology Food Science & Technology

Field	2006 Publications	2000-2006 Field Increase
Zoology	10	47%
Automation & Control Systems	18	44%
Engineering, Multidisciplinary	18	44%
Computer Science, Theory & Methods	15	40%
Microbiology	15	40%
Infectious Diseases	15	40%
Engineering, Electrical & Electronic	49	35%
Thermodynamics	11	33%
Computer Science, Artificial Intelligence	16	32%
Engineering, Civil	18	28%
Mathematics, Applied	25	27%
Immunology	18	24%

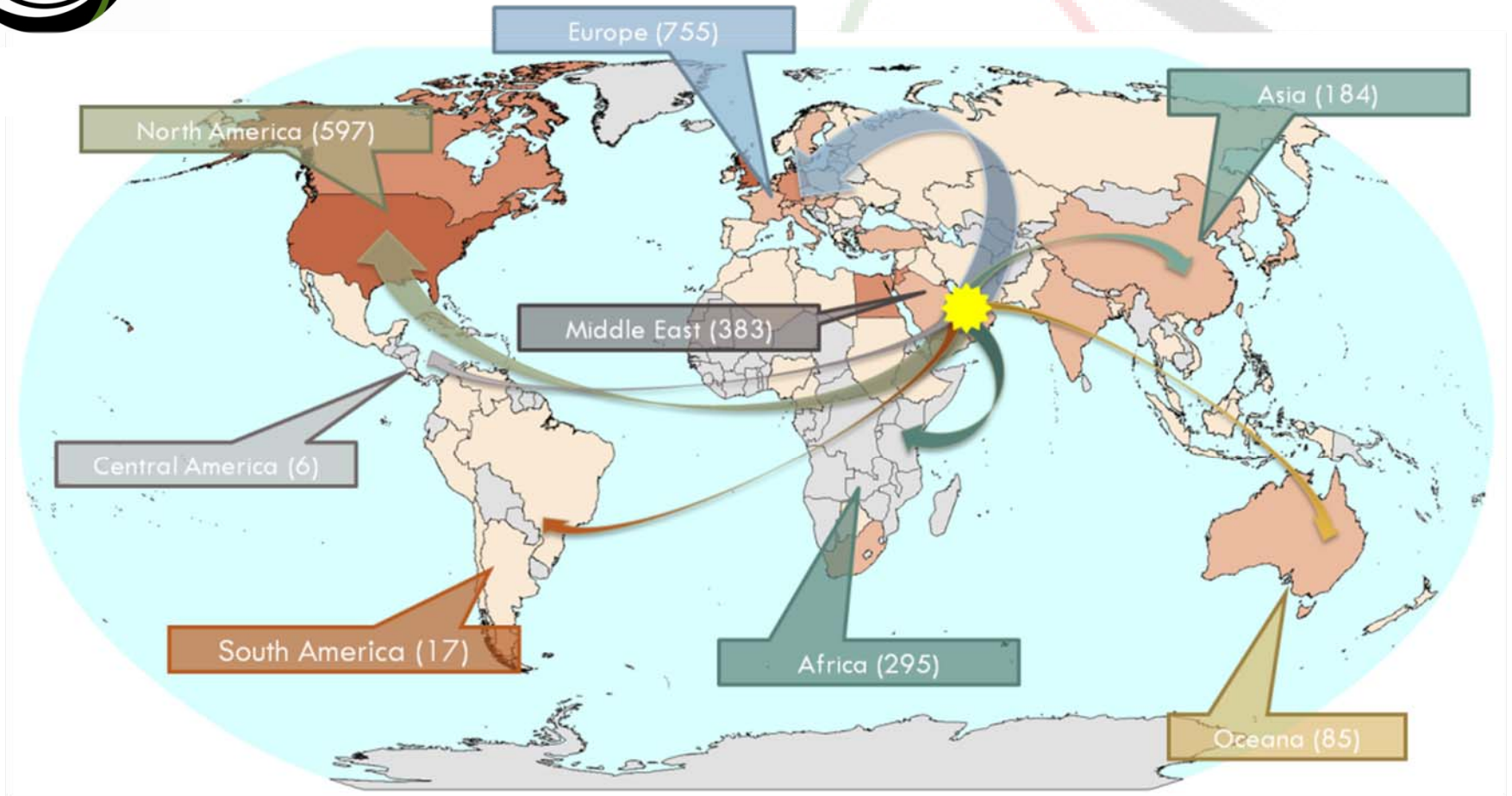


## Share of UAE international co-authored papers in 2000, 2003, and 2006

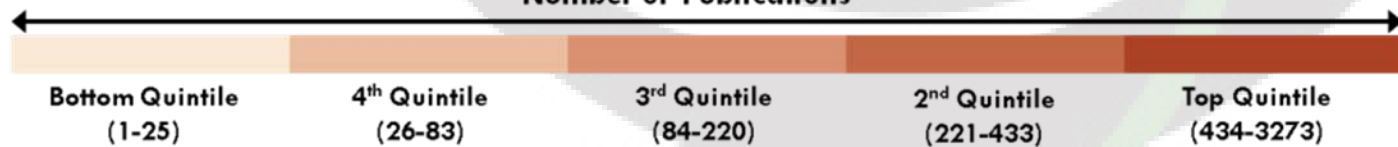
Country	2000	2003	2006
USA	23%	23%	25%
UK	19%	15%	15%
Egypt	22%	13%	8%
Canada	10%	15%	8%
Jordan	7%	7%	4%
Germany	2%	8%	9%
France	2%	6%	7%
Saudi Arabia	6%	4%	4%
Kuwait	5%	4%	4%
Australia	2%	5%	3%



# UAE International Scientific Publication Collaboration

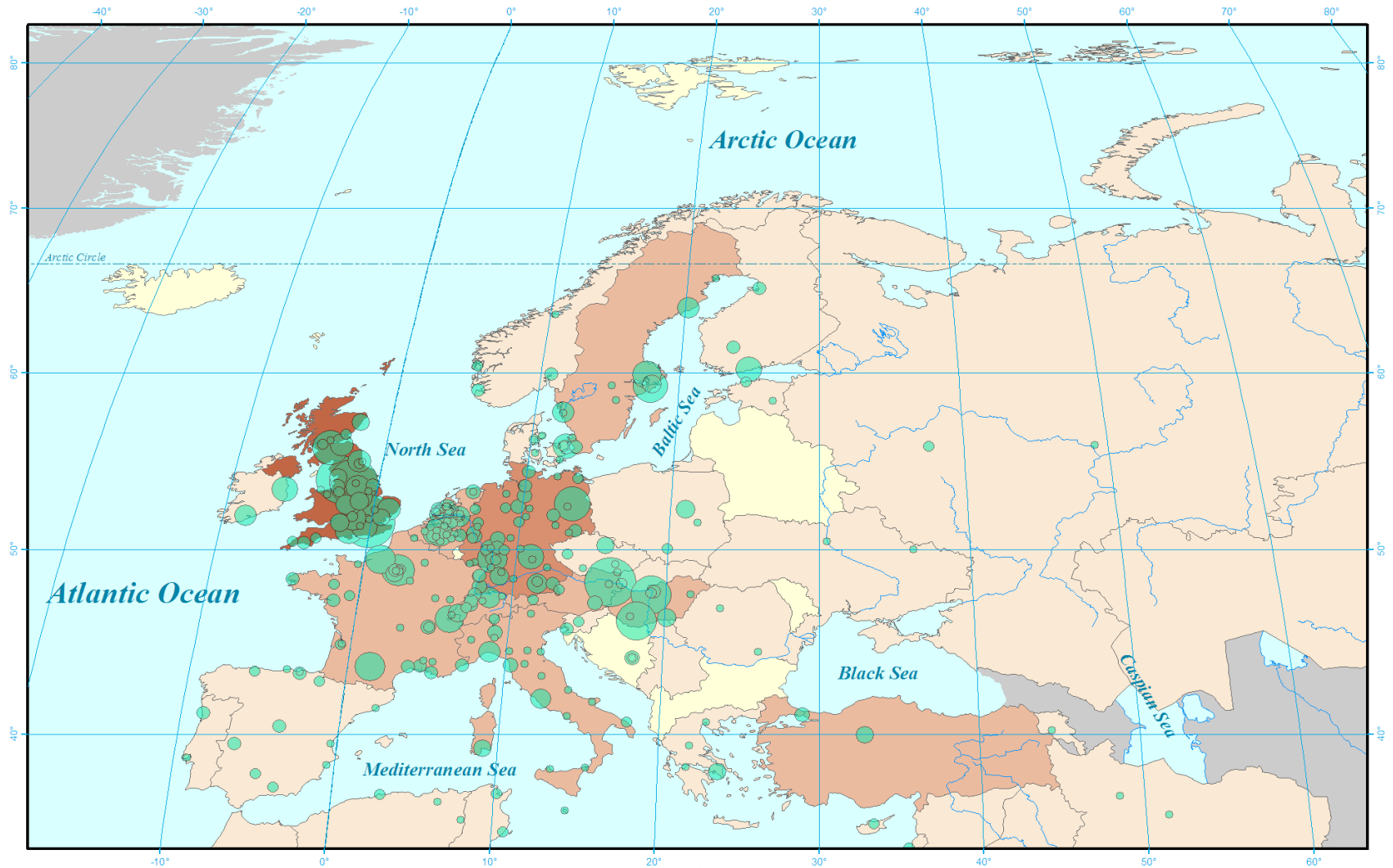


Number of Publications

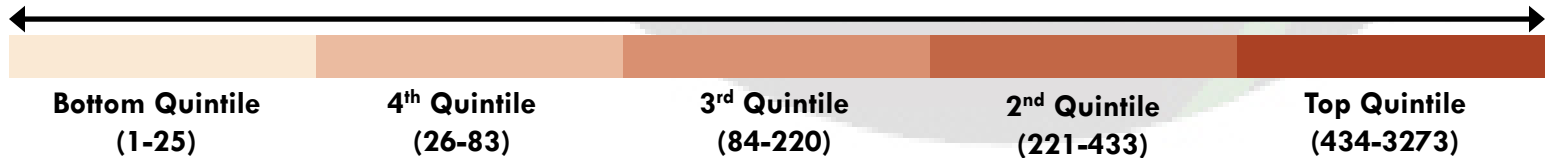


Source: SRI International Analysis of ISI Web of Science Data, 2000-2006

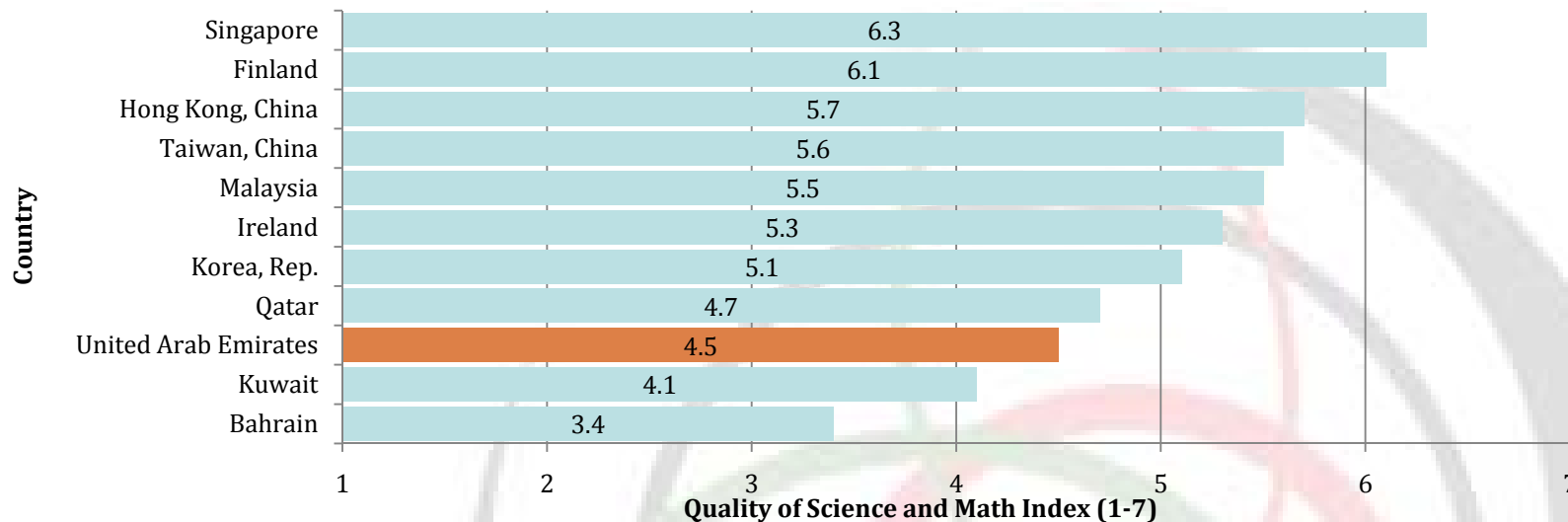
# UAE Scientific Collaborators in Europe



Number of Publications

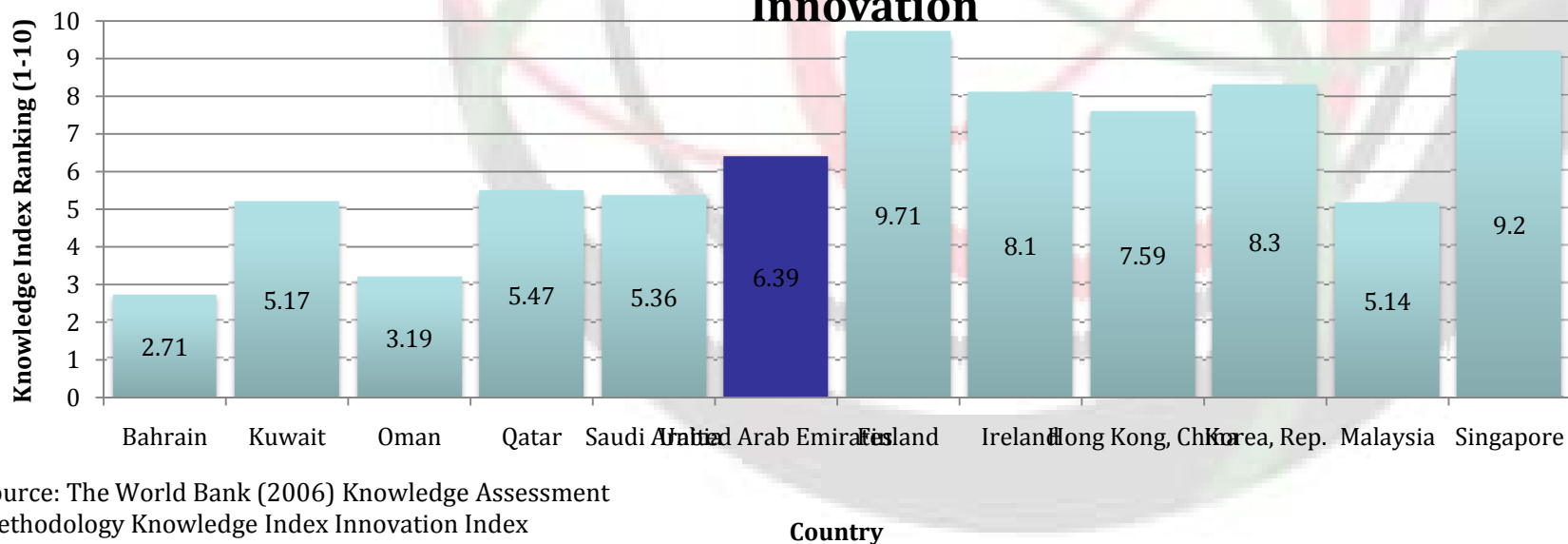


## Quality of Science and Math Education (2006)



Source: The World Bank (2006) Knowledge Assessment Methodology Knowledge Index Innovation Index and World Economic Forum (2006/7) Global Competitiveness Report.

## GCC Countries Relative Position in the Knowledge Economy: Innovation



Source: The World Bank (2006) Knowledge Assessment Methodology Knowledge Index Innovation Index



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# NRF Competitions

- ① **Research Excellence Centers**
- ① **Individual Awards**
- ① **Early Career Awards**
- ① **Industry linkage Awards**
- ① **Network Awards**
- ① **Innovation & Entrepreneurship Awards**



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# Stakeholders

## **NRF and the Federal Institutions**

- ① UAEU,
- ① Zayed University,
- ① HCT

## **NRF and CAA Accredited Institutions**

- ① 56 heterogeneous institutions



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# Gulf Research Foundations

1. NRF, UAE; [www.nrf.ae](http://www.nrf.ae)
2. Mohamed Bin Rashid Al Maktoum Foundation, UAE; [www.mbrfoundation.ae/english](http://www.mbrfoundation.ae/english)
3. Masdar Institute, UAE; [www.masdaruae.com](http://www.masdaruae.com)
4. Emirates Foundation, UAE; [www.emiratesfoundation.ae](http://www.emiratesfoundation.ae)
5. The Arab Science and Technology Foundation, UAE; [www.astf.net](http://www.astf.net)
6. The ICT fund of the Telecommunications Regulatory Authority, UAE; [www.tra.ae](http://www.tra.ae)
7. Gulf Research Council, UAE; [www.grc.ae](http://www.grc.ae)
8. Qatar Foundation; [www.qf.org.qa](http://www.qf.org.qa)
9. Kuwait Foundation for the Advancement of Sciences; [www.kfas.com](http://www.kfas.com)
10. King Abdulaziz City for Science and Technology (KACST), KSA; [www.kacst.edu.sa](http://www.kacst.edu.sa)
11. King Abdullah University of Science & Technology, (KAUST), KSA; [www.kaust.edu.sa](http://www.kaust.edu.sa)



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# Conclusion

**Thank you for listening patiently**

**Now for Questions!**