

**Clusters of Centres of Excellence
as per their fields of interest/specialization**

1. Biotechnology

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Tianjin Institute of Industrial Biotechnology (TIB), China	Collaborative R&D and Capacity Building, under CCIB's Joint R&D Groups (JRDGs) on Biomedicine, Bio-Agriculture, Future Food, Biomaterials, Biochemicals and Bioenergy.
2.	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	R&D Collaboration in Herbal Medicine and Medicinal Plant, Biotechnology, Biomedicine, Biomaterials, Biochemical, and Bio fuel (bio refinery).
3.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	R&D Collaborations in Food Science and Technologies (Nutrition and Functional Foods, Food Microbiology and Biotechnology).
4.	International Centre for Physics (CIF), Colombia	Expertise in Environmental Biotechnology and Bio-fertilizers.
5.	The Sepuluh Nopember Institute of Technology (ITS), Indonesia	R&D Collaboration in Biodiversity and Natural Products.
6.	International Center for Chemical and Biological Sciences (ICCBS), Pakistan	R&D Collaboration in Chemical Sciences and Biological/Biomedical Sciences
7.	Tanzania Industrial Research and Development Organization (TIRDO), Tanzania	R&D Collaborations in Drug Development; Value Addition on Agro-industrial Waste; Natural Products Sciences, and Industrial Biotechnology.
8.	Embrapa Agrobiologia, Brazil	Agriculture and Organic Farming
9.	Council for Scientific and Industrial Research (CSIR), Ghana	Food Security and Biotechnology
10.	Al-Farabi Kazakh National University (KazNU), Kazakhstan	Biology and Biotechnology
11.	Iranian Research Organization for Science & Technology (IROST), Iran	Biotechnology
12.	National Research Centre (NRC), Egypt	Biotechnology

2. Food Technology/Agriculture

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	R&D Collaboration in Food Safety.
2.	National Research Centre (NRC), Egypt	Capacity Building in Nexus between Water, Food and Energy, as well as Agriculture.
3.	University of The Gambia (UTG), The Gambia	R&D Collaboration and Capacity Building in Food Science and Nutrition.
4.	Industrial Technology Institute (ITI), Sri Lanka	R&D Collaboration and Capacity Building in areas including Food Technology.
5.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	Research Collaborations in areas, including Food Science and Technologies (Nutrition and Functional Foods, Food Microbiology and Biotechnology).
6.	International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica	R&D Collaboration in the areas of Food Irradiation, and Mineral Composition of Food.
7.	Tianjin Institute of Industrial Biotechnology (TIB), China	R&D Collaboration in Future Foods
8.	Council for Scientific and Industrial Research (CSIR), Ghana	Food Security, Crops and Forestry Research
9.	Embrapa Agrobiologia, Brazil	Agriculture and Organic Farming

3. Health/Medical Sciences

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Royal Scientific Society (RSS), Jordan	R&D Collaboration in Medical Equipment Maintenance and Management, Health Technology Management, etc. RSS also has expertise in Bio-Safety & Bio-Security (Microbiology, Virology, Molecular Biology, Environmental Health and Safety).
2.	The Sepuluh Nopember Institute of Technology (ITS), Indonesia	R&D in Artificial Intelligence for Healthcare and Society

3.	National Research Centre (NRC), Egypt	Capacity building in areas, including Tropical Diseases.
4.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	R&D Collaborations in areas, including Early Detection of Infections and Diseases, and Micro/Nano Carrier Systems.
5.	International Center for Chemical and Biological Sciences (ICCBS), Pakistan	Biological/Biomedical Sciences
6.	Al-Quds University (AQU), Palestine	Medical Sciences

4. Information and Communication Technologies

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	R&D Collaborations in areas, including Informatics and Information Security (Electronic ID Applications, Blockchain Applications, e-transformation, Digitalization Technologies, Cloud Computing Technologies, Cyber Security Technologies, Artificial Intelligence Technologies, 5G and beyond Mobile Telecommunications Technologies, Internet of Things, and Semiconductor Technologies).
2.	COMSATS University Islamabad (CUI), Pakistan	Exchange of Faculty, Staff and Students; Co-organizing Training Workshops and Collaborative R&D Activities in areas including ICTs.
3.	The Sepuluh Nopember Institute of Technology (ITS), Indonesia	Cyber Security and Data Science
4.	Al-Farabi Kazakh National University (KazNU), Kazakhstan	Information Technologies
5.	Higher Institute for Applied Science and Technology (HIAST), Syria	Cyber Security
6.	Royal Scientific Society (RSS), Jordan	Digital Transformation Strategic Consulting Services and Software Testing.
7.	University of Granada (UGR), Spain	R&D Collaboration and Capacity Building in Information and Communication Technologies

5. Clean Energy

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	R&D Collaboration in Renewable Energy.
2.	National Research Centre (NRC), Egypt	Capacity Building Activities, inter alia, in nexus between Water, Food and Energy.
3.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	Collaborations in Sustainable Energy (Renewable Energy, Energy Conversion, Electricity Distribution, Power Systems Planning and Power Plant Control Technologies, Fuel Cell and Hydrogen Technologies for Transport and Energy sectors).
4.	National Mathematical Centre (NMC), Nigeria	Research Collaborations for Wind Energy.
5.	Royal Scientific Society (RSS), Jordan	Collaboration for Renewable Energy and enhancing Energy Efficiency.
6.	Higher Institute for Applied Science and Technology (HIAST), Syria	Collaboration in Solar and Fuel Cell Technologies, as well as Hybrid Photovoltaic Systems.
7.	University Cheikh Anta Diop (UCAD), Senegal	Renewable Energies and Electrical Sciences.

6. Climate Change/Environment

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	National Research Centre (NRC), Egypt	Capacity Building Activities in Climate Change and Low-Emission Transportation.
2.	International Center for Climate and Environment Sciences (ICCES), China	Earth System Model Development & Application, including China's Big Science Facility (Earth Lab) for joint research activities.
3.	International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica	Collaboration in Environmental Geochemistry, Trace Elements in Air Particulate Matter, Heavy Metal Pollution, Mineral Composition of Food, Trace Elements in Animal/Human Tissue, Biogeochemical Cycles/ Climate Change, Forensics, Trace and Heavy Metals in Marine Environment, Food Irradiation, and Sterile Insect Technique.

4.	Royal Scientific Society (RSS), Jordan	Collaboration in Climate Change as well as Environmental Health and Safety
5.	Council for Scientific and Industrial Research (CSIR), Ghana	Climate Change
6.	Al-Quds University (AQU), Palestine	Environmental Sciences.

7. Nanotechnology

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	Collaboration in Nanotechnology
2.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	Collaboration in Materials Technologies (Sensor and System Technologies, Early Detection of Infections and Diseases, Micro/Nano Carrier Systems, and Biomaterials).
3.	Higher Institute for Applied Science and Technology (HIAST), Syria	Collaboration in the area of Nanotechnology.
4.	Al-Quds University (AQU), Palestine	Collaboration in the area of Nanotechnology.

8. Water Research

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	National Research Centre (NRC), Egypt	Capacity Building Activities in Water, Sustainable Water Management, as well as nexus between Water, Food and Energy, and Agriculture.
2.	Water Research and Technologies Centre (CERTE), Tunisia	Joint trainings on Wastewater Treatment and Reuse; Local Water Management; Desalination of Water (Brackish and Sea); and Low-cost and Sustainable Technologies for Rural Areas.

9. Materials Sciences

Sr #	Centres of Excellence	Areas of Interest/Specialization
1.	Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh	Collaboration in Materials and Metallurgical Science and Engineering.
2.	The Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye	Collaboration in Materials Technologies (Sensor and System Technologies, Early Detection of Infections and Diseases, Micro/Nano Carrier Systems, and Biomaterials).
3.	Council for Scientific and Industrial Research (CSIR), Ghana	Materials, Built Environment & Manufacturing.
4.	Industrial Research and Consultancy Centre (IRCC), Sudan	Materials Analysis (Chemical and Physical)
5.	National Research Centre (NRC), Egypt	Materials Sciences