EURAXESS India
Newsletter is a quarterly
electronic publication. It
provides information
about conducting
research in Europe or
with European partners
and gives insights for
Indian and European
researchers who are
interested in the
European research
landscape.

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you would like to make.

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http://ec.europa.eu/euraxess
Denmark is a Scandinavian country comprising the Jutland Peninsula and numerous islands. It's linked to nearby Sweden via the Öresund bridge.

Copenhagen, its capital, is home to royal palaces and colorful Nyhavn harbor, plus the Tivoli amusement park and the iconic “Little Mermaid” statue.

Odense is writer Hans Christian Andersen’s hometown, with a medieval core of cobbled streets and half-timbered houses.

According to the International Monetary Fund, Denmark has the world's highest minimum wage.

Capital: Copenhagen
Dialling code: +45
Currency: Danish krone
Population: 5.831 million (2020)

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1 EURAXESS country in focus: Denmark

Denmark is a Nordic country in Northern Europe. It is the most populous and politically central constituent of the Kingdom of Denmark, a constitutionally unitary state that includes the autonomous territories of the Faroe Islands and Greenland in the North Atlantic Ocean.

European Denmark is the southernmost of the Scandinavian countries, lying southwest of Sweden, south of Norway, and north of Germany. Spanning a total area of 42,943 km² (16,580 sq mi), it consists of the peninsula of Jutland and an archipelago of 443 named islands, of which the largest are Zealand, Funen and the North Jutlandic Island.

Denmark's geography is characterised by flat, arable land, sandy coasts, low elevation, and a temperate climate. As of 2022, it had a population of 5.91 million (1 July 2022), of which 800,000 live in the capital and largest city, Copenhagen. Denmark exercises hegemonic influence in the Danish Realm, devolving powers to handle internal affairs.

An industrialised exporter of agricultural produce in the second half of the 19th century, Denmark introduced social and labour-market reforms in the early 20th century, which formed the basis for the present welfare state model and advanced mixed economy. Denmark remained neutral during World War I but regained the northern half of Schleswig in 1920.

Danish neutrality was violated in World War II following a swift German invasion in April 1940. During occupation, a resistance movement emerged in 1943 while Iceland declared independence in 1944; Denmark was liberated in May 1945. In 1973, Denmark, together with Greenland but not the Faroes, became a member of what is now the European Union, but negotiated certain opt-outs, such as retaining its own currency, the krone.
Denmark is a highly developed country with a high standard of living: the country performs at or near the top in measures of education, health care, civil liberties, democratic governance, and LGBT equality. Denmark is a founding member of NATO, the Nordic Council, the OECD, OSCE, and the United Nations; it is also part of the Schengen Area.

Denmark maintains close political, cultural, and linguistic ties with its Scandinavian neighbours, with the Danish language being partially mutually intelligible with both Norwegian and Swedish.

Education in Denmark

All educational programmes in Denmark are regulated by the Ministry of Education and administered by local municipalities. Following graduation from compulsory education, there are several continuing educational opportunities; the Gymnasium (STX) attaches importance in teaching a mix of humanities and science, Higher Technical Examination Programme (HTX) focuses on scientific subjects and the Higher Commercial Examination Programme emphasises on subjects in economics.

Higher Preparatory Examination (HF) is like Gymnasium (STX) but is one year shorter. For specific professions, there is vocational education, training young people for work in specific trades by a combination of teaching and apprenticeship.

The government records upper secondary school completion rates of 95% and tertiary enrolment and completion rates of 60%. All university and college (tertiary) education in Denmark is free of charges; there are no tuition fees to enrol in courses. Students aged 18 or above may apply for state educational support grants, known as Statens Uddannelsesstøtte (SU), which provides fixed financial support, disbursed monthly.

Danish universities offer international students a range of opportunities for obtaining an internationally recognised qualification in Denmark. Many programmes may be taught in English language, the academic lingua franca, in bachelor’s degrees, master's degrees, doctorates and student exchange programmes.

Roskilde University (RUC) is a Danish public university founded in 1972 and located in Trekroner in the Eastern part of Roskilde. Roskilde University offers higher education at bachelor-, master, and Ph.D. levels within four main areas: humanities, humanistic technologies, social science and science.

The University of Southern Denmark (SDU) offers world class education and is committed to an international perspective, at all levels. The largest campus is in the city of Odense (Funen) and other campuses are in the cities of Kolding, Esbjerg, Sønderborg (Jutland) and Slagelse (Zealand).

Aalborg University (AAU) has been providing students with academic excellence, cultural engagement, and personal development since its inception in 1974. It offers education and research within the fields of natural sciences, social sciences, humanities, technical and health sciences.

The Technical University of Denmark (DTU) is a leading technical university with a world-class reputation. One fifth of DTU's scientific staff is recruited internationally and an increasing number of the students are also from abroad. DTU has contributed to Denmark achieving a leading position within Technical Design, Wind Energy, Biotechnology, Electronics and Communication Technologies.

Read more about higher education in Denmark:
Higher Education Institutions — Study in Denmark

Danish Universities

With over 38,000 students and more than 9,000 employees, the University of Copenhagen is one of the largest institutions of research and education in the Nordic countries.

The IT University of Copenhagen is an independent educational and research institution, dedicated to the digital world. The university works to make Denmark exceptionally good at making value through IT by providing contemporary study programmes and research at the highest academic level.

Copenhagen Business School (CBS) was established in 1917. Today, with over 22,000 students and 1,500 employees, CBS is one of the largest business schools in Europe and one of the 8 Danish universities.

Aarhus University offers over 50 English taught courses from a wide range of subject areas at bachelor’s and master’s level, and all our PhD’s are English taught. Around 12% of our students are international – from 120 different countries.

Read more about higher education in Denmark:
Higher Education Institutions — Study in Denmark
Research funding in Denmark

The Danish Agency for Science and Higher Education Technology (Ministry of Higher Education and Science) serves and oversees a wide range of independent counsels, commissions, and committees which fund, support and advise on research and innovation. The most significant ones are The Danish Council for Independent Research and Innovation Fund Denmark.

Independent Research Fund Denmark support and promote the most original ideas and initiatives within Danish research. On annual basis, the Independent Research Fund Denmark awards 400 grants to research projects. In total, the grants amount to well over DKK 1 billion.

In order to ensure that the grants are given to the absolutely best research projects, the grants are allocated via open calls without thematic limitations. The Independent Research Fund Denmark supports specific time-limited research activities and scientific quality is the most important assessment criteria when distributing the funds.

The fund constantly works to ensure the best conditions for free curiosity-driven research in Denmark. Among other things this is done through the research advisory services which the Fund provides to the Minister for Higher Education and Science, the Danish Parliament, and the Danish Government.

Independent Research Fund Denmark participates in a number of research networks at Nordic, European and global level.

The aim is to strengthen and further develop the internationalisation of Danish research and thus ensure that the best Danish researchers and research groups get an opportunity to coordinate and develop their research cooperation across national borders.

Read more about the Danish Advisory and Funding System and Danish research policy and the European Commission's Research and Innovation:

- Home — Uddannelses- og Forskningsministeriet (ufm.dk)
- Policy Support Facility | Research and Innovation (europa.eu)
- Research funding | EURAXESS Denmark
- Independent Research Fund (dff.dk)

Research and development (R&D) in Denmark

Denmark is one of the few countries in the EU that have reached Europe’s 2020 target for R&D intensity of 3% of GDP, and the European Innovation Scoreboard (EIS) ranks Denmark as an Innovation Leader.

However, its innovation performance varies across different fields and parameters. The Danish Minister of Higher Education and Science had asked the PSF panel to focus on "how to build the most effective bridges between research-based knowledge building and the application of this knowledge in business and society".
Science and technology

With an investment of 8.5 million euros over the ten-year construction period, Denmark confirms participation in E-ELT.

Denmark has a long tradition of scientific and technological invention and engagement and has been involved internationally from the very start of the scientific revolution. In current times, Denmark is participating in many high-profile international science and technology projects, including CERN, ITER, ESA, ISS and E-ELT. Denmark was ranked 9th in the Global Innovation Index in 2021, down from 6th in 2020 and from 7th in 2019.

In the 20th century, Danes have also been innovative in several fields of the technology sector. Danish companies have been influential in the shipping industry with the design of the largest and most energy efficient container ships in the world, the Maersk Triple E class, and Danish engineers have contributed to the design of MAN Diesel engines. In the software and electronic field, Denmark contributed to design and manufacturing of Nordic Mobile Telephones, and the now-defunct Danish company DanCall was among the first to develop GSM mobile phones.

Life science is a key sector with extensive research and development activities.

Danish engineers are world-leading in providing diabetes care equipment and medication products from Novo Nordisk and, since 2000, the Danish biotech company Novozymes, the world market leader in enzymes for first generation starch-based bioethanol, has pioneered development of enzymes for converting waste to cellulosic ethanol.

Medicon Valley, spanning the Øresund Region between Zealand and Sweden, is one of Europe’s largest life science clusters, containing a large number of life science companies and research institutions located within a very small geographical area.

Danish-born computer scientists and software engineers have taken leading roles in some of the world’s programming languages: Anders Hejlsberg (Turbo Pascal, Delphi, C#); Rasmus Lerdorf (PHP); Bjarne Stroustrup (C++); David Heinemeier Hansson (Ruby on Rails); Lars Bak, a pioneer in virtual machines (V8, Java VM, Dart).

Physicist Lene Vestergaard Hau is the first person to stop light, leading to advances in quantum computing, nanoscale engineering, and linear optics.
Status of Indo-Danish R&I cooperation

Denmark has a strong research & innovation culture. Home to 7 high-ranked universities and countless business and vocational schools, Denmark’s research strengths span across the natural and social sciences, business and innovation, technology, and design.

Since 2020, the Indo-Danish relationship has been extremely strong. After signing a bilateral Green Strategic Partnership between India and Denmark, there has been a marked increase in collaborations, specifically in the areas mandated by the Green Strategic Partnership, which has taken shape in several different forms including calls for bilateral funding.

Earlier this year, The Department of Science and Technology (Government of India) and the Innovation Foundation in Denmark had released a joint funding call for green fuels including hydrogen which received 23 proposals from 92 partners across academia and industry. The Danish Agency for Higher Education and Science had also included India as a prioritised geography in the funding call titled “Global Innovation Network Programme”. This programme aims to increase the global impact of Danish research and innovation in specific areas including India with significant innovation potential along with international partners.

Highlighting India’s R&I ecosystem through Indian students and startups as a priority in bilateral activities and Innovation Centre Denmark (ICDK) Bangalore has two such initiatives. Since 2021, ICDK Bangalore has helped facilitate India’s participation in the “Next Generation Water Action Challenge” an innovation challenge hosted by the Technical University of Denmark, along with several partners including Atal Innovation Mission. This Summer, two Indian students attended the Elite Robotics Summer School organised by the University of Southern Denmark. The students had the opportunity to attend this international summer school with 30 of some of the brightest robotics students and interact with research and corporate stakeholders in Denmark.

This is a great time for the Indo-Danish relationship. With a visit to India from Prime Minister Mette Frederiksen to India in October 2021 and a visit to Denmark by Prime Minister Narendra Modi, the potential for an increase of Indo-Danish R&I is at an all-time high.
2 HOT TOPIC: Research integrity in the battle for hearts and minds

Social media has shaken the foundations of what information reaches who and how to the point that governments and traditional media are no longer the so-called “gatekeepers” of truth, the unquestioned authorities of right and wrong. This has widespread implications on science and its perception in society today. Under much greater scrutiny, research integrity is more important than ever.

Media democratisation is a coup for free speech advocates – rallying voices behind major issues, from the #metoo movement to climate action – but it poses a huge challenge to a scientific community whose existence has been forged out of controlled or evidence-based information flow.

As all Euraxess Worldwide (EWW) members are aware, research is the systematic study – thinking, observing, experimenting – aimed at increasing our understanding of ourselves and the world around us. It is often a collective endeavour drawing on the work of other researchers, seeking to produce evidence and information that is free from ideological, economic, or political interests.

That is the core rationale behind the European Code of Conduct for Research Integrity, as published by the European Federation of Academies of Sciences and Humanities (ALLEA), which underlines the research community’s responsibility to: “Formulate the principles of research, to define the criteria for proper research behaviour, to maximise the quality and robustness of research, and to respond adequately to threats to, or violations of, research integrity.”

The Code is effectively a “framework for self-regulation” outlining science’s professional, legal and ethical responsibilities under four headlines ‘good practices’:

1. **Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis, and the use of resources.

2. **Honesty** in developing, undertaking, reviewing, reporting, and communicating research in a transparent, fair, full and unbiased way.

3. **Respect** for colleagues, research participants, society, ecosystems, cultural heritage, and the environment.

4. **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision, and mentoring, and for its wider impacts.
Social media is changing not only the way people communicate, but also the way society sees itself, who it listens to, what ideas are formulated, and which ones receive elevated status … becoming “personal truths”.

For health authorities trying to combat a potentially lethal disease or climate scientists trying to present hard facts about global warming, alternative narratives about vaccines or climate change, coupled with an ongoing Covid-19 pandemic have made it “painfully clear that we need to become more adept at communicating science within society”, notes ALLEA in an interview with Professor Massimiano Bucchi (below).

Digital disruptors in the 21st century have effectively turned the way we are governed on its head, suggests Taylor Owen of the University of British Columbia, Canada, in a weforum blog. He says democratic nation states and the media largely coexisted within a “mutually beneficial information ecosystem” for much of the previous century. With just a few information “gatekeepers and captive audiences”, communication was more concentrated, and so too the power (of authority) that it could engender.

“This largely symbiotic relationship has been radically disrupted by the concurrent rise of digital technology and the social media ecosystem that it enabled,” Mr Owen notes. “Nowhere is this challenge more acute than in the world of international affairs and conflict, where the rise of digitally native international actors has challenged the state’s dominance.”

Science policy is part progenitor, part co-creator of the strong relationship forged over centuries between scientific authority and political leadership. By tackling science disinformation, the research community plays an important role in addressing, maintaining and building society’s trust in a fact-based world and in the authorities whose job is to protect and serve that world.

Euraxess Worldwide functions as a networking platform for mobile researchers but also a reliable source of information and ideas on research and innovation jobs, funding, and hosting opportunities in Europe and around the world. As such, EWW members are encouraged to uphold the research integrity and open access principles, to communicate their findings with a view to promoting even greater, transparency, accountability and FAIRness (see EWW feature ‘Where open science meets the world of learning’).

We provide a reminder of some communication golden rules to help EWW communicators deal with this huge task (see box).
**Fact or fake? Science communication tackles disinformation epidemic**

If ever there was a time for good science communication it is now, according to Massimiano Bucchi, Professor of Sociology of Science and Communication, Science and Technology at the University of Trento. As one of the leading European scholars on science communication or “the social conversation(s) around science”, he believes there should be greater focus on developing communication and engagement activities based on scientific data and practices.

He is also a strong advocate for attitude changes and better training in science communication overall to tackle public scepticism, scientists’ reluctance to ‘popularise’ their work, and policy makers misunderstanding of their roles.

“Unfortunately, a representation of the public as hostile, sceptical and ignorant is still widespread among policy makers and experts, supporting a paternalistic and authoritarian vision of science communication and of science in society,” he tells ALLEA’s editorial team.

The best way to tackle fake news is to refute it with hard facts. Failure to do that on all levels and through all possible channels – mainstream and social media but also in art and daily interaction – can lead to the problems science faces with alternate views of Covid and the safety and utility of vaccines against the SARS-CoV-2 virus and many preventable diseases.

**Hard facts**

“While disinformation strategies are intoxicating public discourses in many fields, science disinformation is particularly dangerous to democratic governance and society at large,” notes ALLEA about its recent discussion paper entitled *Fact or fake? Tackling science disinformation*.

Indeed, a communication chasm easily forms when insufficient effort is put into making science easier for different audiences to comprehend and opening up to more spontaneous and fun forms of engagement, such as science cafés, comedy, popular music and films.

“I am not sure misinformation is the main challenge,” Prof. Bucchi tells the ALLEA team, “at least in the narrow way in which it is usually defined through terms like ‘fake news’.” The bigger and broader challenge, he explains, is the quality of science communication and finding ways to reward those prepared to challenge the status quo.

The EU is fully aware of this challenge and has long sought to promote science communication, both as a condition for awarding funding through its research framework programmes; the latest being Horizon Europe which stipulates that “beneficiaries must carry out activities to increase the impact of their results”. That effectively means better ‘science communication’. On the same page describing this requirement, the European Commission’s Research Executive Agency lists various free services offered to enable open science communication, what it calls “exploitation and dissemination”.

Science communication has been on the EU’s radar since it started a dedicated award under the auspices of the ‘Descartes Prize’ back in 2004, which encouraged bold science storytelling. A more recent addition to this landscape is the European Research Council (ERC) which introduced its own science communication prize called the Public Engagement with Research Award.

“Engagement is a two-way process, involving interaction and mutual understanding for mutual benefit,” the ERC explains. It gives out three prizes worth EUR 10,000 each to grantees who demonstrate novel ways to involve (citizen science), inspire (public outreach), and influence (media and policy).
Interview with Dr. Bernard Chenevier on the MSCA Staff Exchanges - international research collaboration India, Japan and Europe

EURAXESS India interviewed Dr. Bernard Chenevier from Okayama university Japan during his visit to India. His aim was to introduce high ranked Indian institutions to the various opportunities of participation in EU HORIZON-EUROPE. His visit specifically focused on the MSCA Staff Exchanges programme.

Can you tell us a bit about yourself, about your background as a scientist and your role in your current position?

I am a senior scientist of CNRS in France. CNRS is covering any field of knowledge and it is a very valuable internationally speaking research center […]. My first contact with Japan started in 1990 when I was a JSPS P-Doc researcher in Tsukuba at NRIM one of the ancestors of NRIM. I moved to Tsukuba, a science city north of Tokyo. And I spent two years there working in the field of electron microscope. Later, in 2014, I decided to return to Japan. I had the big chance to meet Professor Yamamoto Shinichi. At that time, he was the vice president of research at Okayama University, and he invited me to come to the university to participate in the international development of the university in the field of research.

In your work you are focusing on international cooperation, especially with Europe. Could you tell us a bit more about this collaboration and, how you see the synergies which are there between Japan and Europe?

When I arrived at Okayama university, my first job was to understand what was going on in terms of research. I was very impressed by the high level of research. This convinced me to implement a strategy of development, combining high level research as well as higher education in combined approach. I could implement a strategy of research development within the European Commission because I understood the European Commission and its specific programs like staff exchange and Marie Skłodowska-Curie Actions.

The MSCA Staff Exchanges program is very convenient for the Japanese because it's easy to apply. Of course, it is very, very selective. Even if Third Countries like Japan or India are not directly supported by the EU Commission funding, the return of investment is huge in terms of visibility at international level. We get hundreds of months of mobility at Okayama University per year.
This transforms the face of the university because now all the yearlong, you have many people coming from around the world, not only Europe, but also from other countries in the world. Therefore, I am very much interested in collaborating and developing consortium within the Horizon 2020 previously and now Horizon Europe.

Recently we got a project labeled ‘Hep history’. The project is about public policies for higher education, how public policies can improve the performance of universities. Another project which is also related with humanities and social sciences. BRKO, has been running for three or four years now, and it is specifically focused on archeology in Japan.

In your work you are focusing on international cooperation, especially with Europe. Could you tell us a bit more about this collaboration and the consortia you have built?

The project BRKO is very good for Okayama University because it brings a lot of scientists and PhDs and postdocs to the universities in terms of months of mobility. Over four years, we have more than 200 months of mobility at Okayama University. In September we organize a summer school, and early next year we have the final exhibition, the final event of this project that will come to an end by April 2023.

Can you tell us where do you see the benefits of international collaboration, like under Horizon Europe, under the Marie Skłodowska-Curie Action, and as you were mentioning, Staff Exchanges?

Staff Exchanges is an excellent Springboard for Spin-Off and Start-up issued from Universities. In the Staff Exchanges they find a window to promote their products and methods (for free). Several Universities in Europe have such Spin-Off oriented strategies - it is completely possible also in India. I am doing it at Okayama University.

The indirect benefits are increasing visibility and international attractiveness, increasing the number of PhD and post-doc visiting the institute. But not only this, we have very, very positive side effect with Staff exchanges. […] For instance, once an institute in Japan or in India is involved, master students from Europe or from the universe from North America who frequently have mandatory internship to perform can take part in this large and international and prestigious project. So, it's not only the staff exchange itself and the deliverables. It is a kind of context, and it must be globally understood. These are the main benefits for the Asian countries. Nearly any kind of institution can participate in MSCA Staff Exchanges.

In India, the Marie Skłodowska-Curie Actions is known, especially for postdoc and individual PhD fellowship opportunities. Let's say I am in an institution, and I want to participate in MSCA Staff Exchanges. Can you tell me how can I participate?

The way to apply is first to find any innovative research idea and innovative concept […] what kind of research to develop, and network in the proposed consortium. First, innovative idea. Second, being trained to negotiate because we must find a good coordinator in Europe and convince him that

"Nearly any kind of institution can participate in MSCA Staff Exchanges"

The MSCA Staff Exchanges programme contributes to excellent research, boosting jobs, growth and investment by training researchers for new knowledge and skills. It fosters research cooperation across borders, sectors and disciplines.

The action encourages short-term international, interdisciplinary and inter-sectoral exchanges (secondments) of staff members involved in research and innovation activities of participating organisations. It aims to develop sustainable collaborative projects between different organisations from the academic and non-academic sectors (in particular SMEs), based in Europe and beyond.

The Staff Exchanges call for 2022 is open. You can read more here.

http://ec.europa.eu/euraxess
the project is reliable and very good. This is the second step. And then build the project. To build the consortium, it is better if the carrier of the project has a significant network.

**You promote a regional approach with India and Japan under the MSCA Staff Exchanges. What do you think would be the benefits of such a triangle collaboration between Japan, India and Europe?**

I think there is a lot to get from the triangle, as you say Japan, India, Europe, and we can have also other Third countries. But these three main players can get a very strong return in their investment if they are able to work together [...] For instance, more specifically in the field of math, applying mathematics, artificial intelligence, matching learning and big data processing, collaboration between Japan and India and Europe can be very fruitful.

Thank you so much, Dr. Bernard Chenevier.

The interview was conducted by Dr. Samrat S. Kumar, Country Coordinator EURAXESS India, on 23rd August 2022.
4 In case you missed it...

Find latest EU Research and Innovation News and open Calls on our EURAXES India website.

About us

EURAXESS India is a networking tool for European researchers active in India and for Indian and international researchers wishing to collaborate with and/or pursue a career in Europe. EURAXESS India provides information about research in Europe, European research policy, opportunities for research funding, for EU-India and international collaboration and for trans-national mobility. Membership is free.

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EURAXESS Worldwide has dedicated teams in the following countries and regions ready to assist you: Africa, ASEAN (focus on Singapore, Thailand, Indonesia, Malaysia, and Vietnam), Australia & New Zealand, Latin America and the Caribbean (focus on Brazil, Argentina, Chile, Mexico, and Colombia), China, India, Japan, Korea, and North America (USA and Canada).