



## UK Science & Innovation Network Summary:

# Country

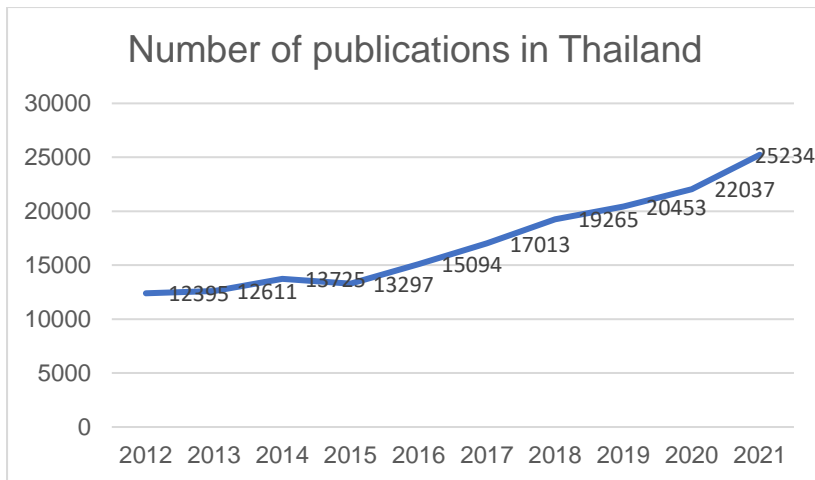
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### 1. **Science and Innovation Landscape** (provide an overview of the country's ST&I ecosystem).

#### Research in Numbers

Thailand has made a significant progress in recent decades to have an innovation-led economy that fosters growth and competitiveness in various sectors through R&D. In 2020, Thailand's gross expenditure on R&D was 208 billion THB. This was equivalent to 1.33% of GDP, which was a marked increase from 0.37% in 2011, and making it the second highest in ASEAN. The increase was mainly attributed to investment from private sectors (mainly from food, construction, electrical equipment industries). The government later announced to increase their spending on R&D to 2% and number of researchers by 2037, with private sector's contributions to similarly rise.

In terms of research outputs, Thailand has doubled its number of publications since 2011, and is expected to increase steadily (Fig 1). The most published areas are related to infectious diseases, catalysts and materials, computational science and algorithms, to physics. In 2023, Thailand's Global Innovation Index is 43, which is 5<sup>th</sup> in upper middle income countries, and only surpassed by Malaysia and Singapore in ASEAN. It is classified as an Innovation Achiever, performing above expectation, relative to their level of Development. It is however worth noting that while the number of patent applications have doubled in recent years, this is still below the world average.



**Fig 1:** Increasing number of publications in Thailand (NSTDA SciVal, 2023)

**Text:** A line graph showing the number of publications in Thailand, starting from 12,395 in 2012, to 25,234 in 2021.

### **S&T Structure and Policies**

Established in 2019, the Ministry of Higher Education, Science, Research and Innovation (MHESI) now oversees higher education and S&T development in Thailand. MHESI was established to ensure coherency of higher education institutions as a key operator to deliver the country's S&T ambitions. Thailand Science Research and Innovation (TSRI) sets the national strategy for S&T for 2027, and oversees relevant policies and research budget for 9 funding agencies. These agencies, known as program management units, develop own funding programmes across different thematic areas, and deliver different research outputs and outcomes.

### **Research Institutions**

Aside from in-house R&D in private sectors, government-funded research activities are delivered by 2 key stakeholders; universities, and research institutes. Notably, top five universities delivering research outputs in 2021 are 1. Mahidol University, 2. Chulalongkorn University, 3. Chiang Mai University, 4. Khon Kaen University, and 5. Kasetsart University.

The National Science and Technology Development Agency is the national research institutes with 5 centres, which focus on 1. Electronics and Computer Technology, 2. Genetic Engineering and Biotechnology, 3. Metal and Materials Technology, 4. Nanotechnology, and 5. Energy Technology.

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## **2. UK partnership with the country on ST&I (here detail the unique relationship between your country and the UK on ST&I)**

The UK and Thailand have a long history of collaboration in science, research and innovation. Many Thai preeminent scientists began their careers at British universities, and today academics and researchers are actively involved in joint research activities with UK counterparts.

Launched in 2015, the UK Newton Fund and the Global Challenge Research Fund (GCRF) played a critical role to support scientific partnerships between the two countries. Being an eligible country, Thai funding agencies also matched funded activities to sustain and expand the activities. These ranged from agriculture and food security, climate resilience, health and infectious diseases, advanced manufacturing, to developing capability for large facilities. Many partnerships are ongoing, and are supported through different opportunities including the International Science Partnerships Fund since 2023, as one of the current funding mechanisms. Other donors including Wellcome Trust also have funded locally on health and biomedical research, and joint research facility.

In March 2023, SIN Thailand completed the **Co-Creating Strategy for UK-Thailand Cooperation in Science, Research, and Innovation (SRI)** Project. This was a study to understand UK-Thailand S&T partnerships through the experience from Newton Fund and GCRF, and to understand strategy alignment between the two countries. The project also proposed thematic areas for future collaboration, and the final report is available on request.

Thematically, the UK has existing links with Thailand across different S&T sectors, as well as with different stakeholders. To date, there are MOU on Genomics Collaboration, Agriculture Collaboration, and Letter of Intent on Digital Cooperation, which all are related to S&T partnerships. We work closely with different UK departments and Thai ministries and policymakers to ensure aligned approach to tackle global challenges, and to best utilise S&T.

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### **3. SIN contacts**

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