

## NRCT develops the country with research and innovation

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Research and innovation have long been recognized as important driving mechanisms of national economy, social development, and even environmental protection. Moreover, with research and innovation, the country can overcome the traps of middle-income, inequality, and imbalance; be prepared to handle possible impacts from global changes; and increase its competitiveness on security, prosperity, and sustainability in consistent with the goals of the National Strategy.

In Thailand, the direction of development in science, research, and innovation has been adopted sequentially from the National Strategy No. 23 (Research and Innovation) of the 20-year National Strategy Master Plans and the National Economic and Social Development Plan and put into the (draft) Science, Research, and Innovation (SRI) Plan 2023–2027. The SRI Plan is to ensure the clear and challenging goals of the overall actions that are not only practicable but also measurable as defined in the four strategies of the Plan. Additionally, the SRI Plan covers the implementation of policy principles that represent a “Giant Step” for the country.

The National Research Council of Thailand (NRCT), a public organization, has played an important role in providing research results to be used as driving tools for the country’s development over the past 60 years. Today, NRCT functions as a “Program Management Unit (PMU)” under the Ministry of Higher Education, Science, Research, and Innovation (MHESI) primarily responsible for managing research and innovation funds in various fields.

In performing this duty, NRCT has planned and established important mechanisms for exploring knowledge and developing innovations to drive economic and social development in line with the Science, Research, and Innovation Strategies. We, the NRCT, focus on research accomplishments, recognitions and valued impacts that respond to urgent problems, increase system efficiency, reduce production costs, improve quality of life, and boost the country’s competitiveness through processes linked to the research framework, which is used to allocate funding. The process of funding follows the three directions of: 1) the National Higher Education, Science, Research, and Innovation Policy Council; 2) the Committee of Thailand Science Research and Innovation; and 3) the Higher Education, Science, Research, and Innovation Policy and Strategy (2020–2027).

The NRCT has other additional important functions supporting research and innovation projects that are aligned with the National Strategy and Master Plan. We develop research datasets into policy developing process. We transform the results of research and innovation processes to outputs that can be utilized to formulate strategic objectives and identify key issues in making research policies on a demand-driven basis. The NRCT is funded by the government of Thailand on the platforms and programs to fulfill its Objectives and Key Results (OKRs) and to implement research and innovation results to support the country’s development in all dimensions.

Presently, our global is facing big challenge on climate crisis, we all, including Thailand, have been severely affected by climate change. Solutions for climate change as a funding agency, the NRCT’s priority and research funding have been shifted to an urgent development in natural resources and environment, which is considered a new normal policy. The funded areas are under Strategy 2: “Enhancing society and environment for sustainability and resilience through science, research, and innovation” of the (draft) SRI Plan 2023–2027. The Strategy 2 aims to utilize research and innovation to solve the country’s urgent natural resource and environmental concerns, as well as to achieve sustainable development goals. The Strategy 2 will evaluate the achievement of three key results (KRs), namely KR1: Innovation, knowledge and technology designed to solve problems and/or be environmentally friendly; KR2: Practical solutions; and KR3: Extending the results of prototype and small-scale projects to other areas or target groups. Research and innovation programs on natural resources and environment operated by the NRCT includes PM 2.5, Zero Waste Management, Climate Change, Biodiversity, Water Resources Management, Blue Economy, and Future Energy and Alternative Energy at the community level.

At the commencement of action on each of the aforementioned issues, the NRCT engages with relevant stakeholders and end users, for example, the Pollution Control Department (PM 2.5), Department of Marine and Coastal Resources (Blue Economy), and the Royal Irrigation Department (Water Management); and a program team is to be formed. The team is to help design research framework, develop project proposals, follow up the implementation of project, and assess project results with experts to generate

innovative findings that support the missions of the participating organizations and are to be widely used in the policy, social/community, and commercial contexts.

However, to move forward the country's growth by research and innovation, NRCT needs to support other related activities and sectors which are covered under the following six key missions:

1) Creating databases and indexes in science and national research and innovation, such as establishing “the National Research and Innovation Information System”, or “NRIIS”, as the core information system that connects national research & innovation data with the information systems of the agencies involved, and supporting international-standard academic journals, like “*ScienceAsia*” and “*Social Science Asia*”;

2) Initiating, driving, and coordinating the operations of nationally important research and innovation projects, such as COVID-19 coping studies;

3) Establishing research standards and ethics, such as standards and ethics for human research, standards on animal care and use for scientific purposes, and safety practices of research laboratory, etc. in order to promote good scientific practice and prevent scientific misconduct;

4) Promoting and transferring knowledge gained from research findings for application in policy, social, and commercial contexts through the knowledge management and transfer mechanisms;

5) Supporting and encouraging personnel development in terms of research and innovation by providing training courses for young researchers and training for the trainers with the ability to transfer knowledge to create a multiplicity of new generations of researchers, as well as promoting the development of professional

researchers in research and innovation systems;

6) Giving awards, honoring, or complimenting individuals or institutions for their outstanding performance on research and innovation to honor Thai researchers and innovators who have made significant contributions to the society, the nation, and the academic community in a variety of academic fields.

In conclusion, research and innovation play an essential role in the country's development. NRCT, as one of the important actors, has defined its vision to be the main national organization for strengthening research and innovation systems by providing research funding, training personnel, and developing research and innovation ecosystems in accordance with the goals of the National Strategy. We work each day to fulfill our missions and to lead Thailand from “developing” to “developed” country. To that end, NRCT will continue to support research programs and projects that aim to meet the Objectives and Key Results (OKRs), and to apply research and innovation results for the country's development processes in all dimensions. As a result, Thailand will overcome the challenges and concerns and achieve the sustainable development goals; and the NRCT is ensured a compliance with the slogan “**NRCT develops the country with research and innovation**”.

## REFERENCES

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