

Participation of Indonesia in FNCA Activities

Edy Giri Rachman Putra

Acting Deputy Chairman of Human Resources in Science and Technology

The National Research and Innovation Agency (BRIN)



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The National Research and innovation Agency (BRIN):

- * a new government institution under the President of the Republic of Indonesia
- * to carry out integrated research, development, assessments and applications, inventions and innovations, as well as nuclear and space management.

BRIN

- Not under coordination of any ministries / coordinating ministries.
- Integrating all (human, infrastructure, budget) resources and research fields of 48 governmental research institutions across ministries and institutes.
- Start of Implementation: August 2021,
- Full transformation into single entity of BRIN: 1 January 2022.



BRIN: Min.Res.Tech.+ 4 Non Min.Inst. + 44 Res.Centers of Min.



National
Institute of
Aeronautics
and Space



Indonesia
Institute of
Sciences



Agency for the
Assessment and
Application of
Technology



National Nuclear
Energy Agency

BRIN is mandated to overcome low critical mass of research resources in Indonesia to:

- Improve research capacity and competences, in particular in term of research infrastructures.
- Attract the young talents on research to join and to contribute in any research activities in Indonesia.
- Support global engagement and collaboration → speed up knowledge and skill transfer through research collaborations.
- Enable government as a facilitator / enabler for local business players to conduct R&D based product development with very low investment.

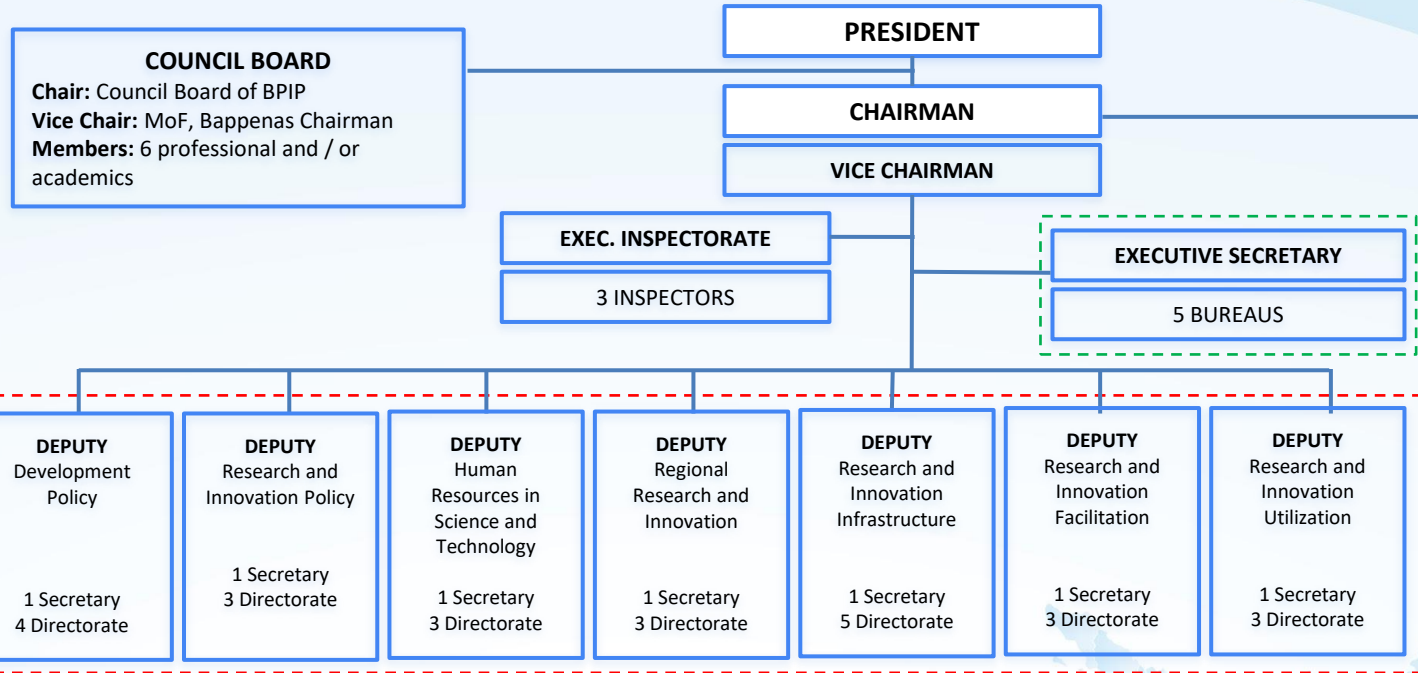
Constitution 11/2019 about National System for S&T

Constitution 21/2013 about Space

Constitution 25/2004 about National Development Planning System

Constitution 10/1997 about Nuclear

BRIN's Organisation



Research Organization

RO. Nuclear Energy

RO. Aeronautics & Space

RO. Technology Assessment and Implementation

RO. Life Sciences

RO. Earth Sciences

RO. Engineering Sciences

RO. Social and Humanity Sciences

RO. Maritime & Fisheries

RO. Archeology

RO. Metrology

RO. Religion & Religious

RO. Linguistic & Literature

RO. Environment & Forestry

RO. Governance & Public Welfare

RO. Agriculture & Farming

RO. Health

internal services + office infrastructure

external services + research infrastructure

research executing units → RO (Research Organization) + Research Center

- **Radiation Utilization Development for Industrial/Environmental/Agricultural Utilization:**
 - ✓ Mutation Breeding
 - ✓ Radiation Processing and Polymer Modification for Agricultural, Environmental and Medical Applications
 - ✓ Research on Climate Change
- **Radiation Utilization Development for Healthcare Utilization**
 - ✓ Radiation Oncology
- **Research Reactor Utilization Development**
 - ✓ Research Reactor Utilization
- **Nuclear Safety Strengthening**
 - ✓ Radiation Safety and Radioactive Waste Management
- **Nuclear Infrastructure Strengthening**
 - ✓ Nuclear Security and Safeguards



- Continue the previous participation (down streaming nuclear application activities) by encouraging **more young talents**

- Preparing a new **national strategic plan in nuclear science and technology** for achieving the **SDGs**
 - **Revitalization** of the existing reactor, neutron beam, accelerator and irradiation facilities;
 - **Development** new facilities of advanced research reactor and high-energy accelerators;
 - **Global platform** for research and development on **NPP technology** in Bangka island;
 - **Capacity building** in nuclear science and technology (\pm 300 PhD and thousands trained talents);

Strategic Plan on Nuclear Science and Technology



Accelerator Technology
(Serpong & Yogyakarta)

Radioisotope Production
Medical Applications
Elemental Analysis
Ion Beam/Radiation Applications
Particle Physics Research

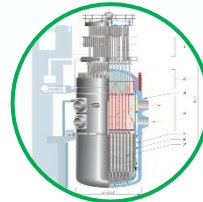


Reactor Technology



Advanced Research Reactor
(Serpong)

Radioisotope Production
Neutron Beam Applications
Nuclear Transmutation
NDT
R&D Nuclear Fuel Element



Advanced Nuclear Power Reactor
(Bangka Island)



Green Energy



Global Collaboration, Support & Engagement


Promoting World-wide Nuclear Education



University of Sharjah
King Saud University

Universiti Teknologi Malaysia
Universiti Kebangsaan Malaysia
Universiti Tenaga Nasional Malaysia



 Internet Reactor Laboratory (IRL)
Kartini in Yogyakarta

Reactor Laboratory Limited Facility

High demand from University

Ineffective and Inefficient



- Future collaboration in the FNCA framework is required;
- Revitalization and development of new facilities for accelerator and research reactor are being set based on co-development, global engagement and transfer technology framework;
- Capacity building in human resources on accelerators and research reactor technologies are focused to fulfill the enhancement of accelerator and research reactor utilization;
- Development of aging management program for RR, parallel with development of annex nuclear facilities related to Safety, Security and Safeguards;
- In conjunction with education, Internet Reactor Laboratory (IRL) is established, promoted and keep on-going developing the system to enhanced accessibility around the world study on Research Reactor



BRIN

BADAN RISET
DAN INOVASI NASIONAL

THANK YOU

Badan Riset dan Inovasi Nasional
the National Research and Innovation Agency



B.J. Habibie Building
Jl. M.H. Thamrin 8, Jakarta 10340, Indonesia



@brin.indonesia



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<http://www.brin.go.id>