Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

EIGHTEENTH CONGRESS
Second Regular Session

HOUSE BILL NO. 7453

Introduced by ANG PROBINSYANO
Party-List Representative Alfred Delos Santos

EXPLANATORY NOTE

The Philippine government recognizes the role of science, technology, and innovation in achieving Ambisyon 2040. From 2009 to 2013, the research and development expenditures as a percentage of the Gross Domestic Product (GDP) increased from 0.11% to 0.14%. However, this is far from the global average of 2.04% and UNESCO recommendation of 1% for developing countries. The bulk of research and development spending in the Philippines comes from the public sector with 60% of total expenditures. Most of the activities relating to research and development are concentrated in the National Capital Region (NCR), Regions IV-A (CALABARZON), and Region III (Central Luzon).

The Department of Science and Technology (DOST) sets the direction of research and development in the country, guided by the socio-economic agenda of the administration, the Philippine Development Plan (PDP), and the DOST Strategic Plan. In the Philippine Development Plan 2017-2022, the annual target for research and development expenditure as a percentage of GDP is set at 0.2% in 2017, increasing to 0.5% by 2022.

The proposed bill, in line with the aforementioned direction and guidelines, emphasizes the role of science, technology, and innovation as a foundation for inclusive growth, a high-trust society, and a globally competitive knowledge economy through increasing the country’s potential economic growth. Increasing research and development in agriculture, industry, and service sectors as well as investments in technology-based start-ups, enterprises will result in the promotion and acceleration of technology adaptation.

On the other hand, this bill, through enhancing the creative capacity for knowledge and technology generation, acquisition, and adoption, and strengthening open collaboration will stimulation innovation which will ultimately have a positive and well-meaning impact on Filipino society, bringing about inclusive progress and holistic development.
In view of the foregoing, immediate approval thereof is highly recommended.

ALFRED C. DELOS SANTOS
Representative, Ang Probinsyano Partylist
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AN ACT ESTABLISHING SCIENCE FOR FILIPINO SOCIETY PROGRAM

Be it enacted by the Senate and the House of Representatives of the
Philippines in Congress assembled:

SECTION 1. Short Title. – This Act shall be known as the “Science for
Filipino Society Act of 2020.”

SECTION 2. Declaration of Policy. – In recognition of the fundamental role
of science and technology, it is the policy of the State to promote science that
reflects and responds to the needs of the Filipino society aiming for sustainable
development and progress. Article II, Section 17 provides:

“The State shall give priority to...science and technology...to
foster patriotism and nationalism, accelerate social progress, and
promote total human liberation and development.”

Equally, Article XIV, Section 10 of the 1987 Constitution states:

“Science and technology are essential for national
development and progress. The State shall give priority to research
and development, invention, innovation, and their utilization; and
to science and technology education, training, and services. It shall
support indigenous, appropriate, and self-reliant scientific and
technological capabilities, and their application to the country’s
productive systems and national life.”

SECTION 3. Objectives. – The objectives of this law are to bring about a
distinguished standard of science and technology, to contribute to the
sustainable and holistic development of the economy and society, and to improve
the total welfare of the nation by means of prescribing basic policy requirements
for the promotion of science and technology and promote policies for progress
through a coordinated and responsive manner.
In order to achieve the objective, the following programs and initiatives shall be expanded, developed, and prioritized:

a. healthcare sufficiency;
b. clean and renewable energy;
c. disaster risk reduction and management (DRRM);
d. pollution control and mitigation;
e. climate adaptation and resilience;
f. clean water and sanitation;
g. sustainable cities and communities;
h. agricultural productivity and food security;
i. nutrition and food safety;
j. nuclear sciences for energy, health, agriculture, and industry;
k. indigenous science and technology;
l. business incubation for technology;
m. foreign scholarships and technology transfer;

 SECTION 4. Policy Framework. – The formulation of Science for Filipino Society Program shall be anchored on the following Research and Development (R&D) Agenda;

4.1. Research and Development to Address Critical Issues

a. Healthcare sufficiency
   i. Diagnostics development
   ii. Drug discovery and development
   iii. Hospital equipment and biomedical devices
   iv. Information and communication technology for health
   v. Emerging disease detection and containment

b. Food and nutrition
   i. Food quality and safety
   ii. Innovative food products
   iii. Affordable nutrition intervention
   iv. Nutrition assessment and monitoring

c. Agricultural productivity and food security
i. Breeding and improvement of crop and livestock varieties
ii. Prevention and control of pests and disease, both existing and emerging
iii. Increasing crop resilience
iv. Smart farming approaches
v. Cultural management practices
d. Biodiversity and natural resources conservation
   i. Sustainable utilization, conservation and management of biodiversity in terrestrial, forestry and marine ecosystems
   ii. Sustainable watershed management and utilization
   iii. Development of high value products from agricultural and forest wastes
e. Intelligent traffic, transportation, and mobility solutions
   i. Intelligent transport system
   ii. Cost-effective alternative mass transport systems
   iii. Automated traffic monitoring, violation detection, public utility vehicle (PUV) tracking and safety signaling systems
f. e-Government efficiency and productivity
   i. Web coordination and security
   ii. Promotion of e-services
g. Human security
   i. Biosecurity
   ii. Cybersecurity
   iii. Key services infrastructure protection

4.2 Research and Development for Clean and Renewable Energy

a. Renewable Energy Sources and Production
   i. Solar
   ii. Wind
   iii. Hydro
   iv. Biomass
   v. Ocean
b. Energy Storage
   i. Cost competitive energy storage
   ii. Development of sustainable and efficient battery and capacitors

4.3 Disaster Risk Reduction and Climate Resilience

a. Observation and Monitoring Networks
b. Technology Development and Application for Monitoring
c. Modeling and Simulation for Improvement of Monitoring and Forecasting
d. Hazards, Vulnerability, and Risk Assessment
e. Warning and Risk Communication
f. Technology Development and Application for Climate Change Mitigation and Adaptation
g. Technology Development and Application for Disaster Risk Management

4.4 Research and Development for New and Emerging Technologies

a. Technological application in biomedical sciences
b. Nuclear sciences for energy, health, agriculture, and industry
c. Information and Communication Technology (ICT)
d. Artificial intelligence

4.5 Research and Development in Business and Production Sector

a. Technology Business Incubation Program
b. Promotion of technology for commercial use
c. Support for implementation of private research for public use
d. Networking of laboratories
e. Product innovation centers
f. Manufacturing industry development
   i. packaging and labeling
   ii. machine and equipment development
   iii. assistance to traditional and indigenous industries

4.6 Research and Development Through Technology Transfer and Institutional Collaboration

a. Inter-departmental collaborations to roll out new and beneficial technologies
b. Community empowerment through science and technology
c. Industry-academe-government collaboration
   i. Co-laboratories
   ii. Co-centers
   iii. Co-facilities
d. International science and technology collaborations

4.7 Capacity Building in Research and Development

a. Accelerated R&D program for capacity building of research and development institutions and industrial competitiveness
   i. Niche Centers in the Regions for R&D (NICER) Program
   ii. R&D Leadership (RDLed) Program
   iii. Collaborative R&D to Leverage PH Economy (CRADLE) for RDI and Industry Program
   iv. Business Innovation through S&T (BIST) for Industry Program
b. Upgrading of facilities and improvement of science and technology services
   i. Product development centers
   ii. Materials and product testing facilities
   iii. Regional research centers
iv. Disaster risk reduction facilities

4.8 Human Resource Development for Science and Technology

a. Foreign scholarships in science and technology
b. Graduate science and technology scholarships
   i. MD/Ph.D. scholarships
   ii. Ph.D. research scholarships
   iii. Expanded MS/Ph.D. scholarships
c. Undergraduate scholarships
d. Secondary level scholarships at Philippine Science High School (PSHS)
e. Innovative modalities for the delivery of human resource interventions
f. Science and Technology Regional Alliance for Inclusive National Development (STRAND)
g. Science Teacher Academy for Regions (STAR)
h. Strengthening research centers in universities in the regions

4.9 Promotion of Science and Technology and Research and Development

a. Promotion of science and technology
   i. Science fairs, symposiums, and conferences
   ii. Establishment of science centers
b. Science and technology education for ordinary citizens
c. Promotion and application of indigenous science and technology
d. Countryside and rural contextualization an application of science and technology
e. Funding support for scientists and research

SECTION 5. Formulation of Science for Filipino Society Program. – The Department of Science and Technology (DOST) shall formulate the five-year Science for Filipino Society Program (referred to as Program) in coordination with other relevant government agencies including state universities and colleges (SUCs) and representatives from the private sector undertaking research and development. The Secretary of Department of Science and Technology (DOST) shall submit the Program for approval within ninety (90) days from the date of effectivity of this Act.

SECTION 6. Comprehensive National Research and Development Agenda. – The Department of Science and Technology (DOST), in consultation with government research institutions and other agencies concerned, shall prepare a comprehensive national research and development agenda for the government covering all major research and development programs and projects or those costing Twenty Million Pesos (Php 20,000,000.00) and above. The proposed agenda shall be submitted for approval by the Director-General of the National Economic Development Authority (NEDA).
Further, the Comprehensive National Research and Development Agenda shall be directly related to the priorities under the Philippine Development Plan.

Further, the Department of Science and Technology (DOST) shall submit to the Department of Budget and Management (DBM), the Speaker of the House of Representatives and the President of the Senate of the Philippines, either in printed form or by way of an electronic document, a copy the approved Comprehensive National Research and Development Agenda. The Secretary of the Department of Science and Technology (DOST) and the Agency's web administrator or the equivalent shall be responsible for ensuring that such a copy is posted on the Department of Science and Technology (DOST) website.

SECTION 7. Mandatory Adaptation of Publicly Funded Technology. – Mandatory adaptation of publicly funded and generated technologies, whenever feasible and practicable, shall strictly be implemented by all government entities or instrumentalities utilizing public funds thereof.

Further, all national government agencies (NGAs), government-owned-and-controlled corporations (GOCCs), state universities and colleges (SUCs), and local government agencies (LGUs) performing science and technology initiatives are mandated to help develop and implement critical and strategic technology development projects and adopt government-funded locally developed technologies. For this purpose, all research and development activities performed by NGAs, GOCCs, SUCs, and LGUs under their respective mandates shall be under the control and supervision of the Department of Science and Technology.

SECTION 8. Science for Filipino Society Fund. – There is hereby created the Science for Filipino Society Fund (referred to as Fund) to be used exclusively for the implementation of the projects and activities under the Program. The Fund shall be administered by the Department of Science and Technology (DOST) in accordance with existing government budgeting, accounting, and auditing rules and regulations.

The Fund shall be sourced from the following:

a. The initial amount of Twenty-One Billion Pesos (PHP 21,000,000,000.00) to be taken from the General Appropriation Act (GAA) and other utilized funds and savings from the GAA of the preceding year, in case the GAA was approved before this law is enacted. The yearly budget for the Program shall double yearly for the next four (4) years. Such amount shall be released to the Department of Science and Technology (DOST) after the date of effectivity of this Act.

b. The income produced by the Program.

c. Loans, contributions, grants, bequests, gifts, and donations whether from local or foreign sources. Provided that, acceptance of grants,
bequests, contributions, and donations from foreign governments shall be subject to the approval of the President upon the recommendation of the Secretary of the Department of Science and Technology (DOST) and the Secretary of the Department of Foreign Affairs (DFA). The Secretary of the Department of Science and Technology (DOST) and subsequently the Department of Finance (DOF) is hereby granted the authority to enter into loan agreements with foreign financial institutions.

SECTION 9. Appropriations. – The initial amount of Twenty-One Billion Pesos (PHP 21,000,000,000.00) is hereby appropriated as the initial operating fund for the projects and activities under the Program, taken from the current fiscal year’s appropriation of the Office of the President. Thereafter, the amount needed for the operation of the Program shall be included in the General Appropriations Act (GAA).

SECTION 10. Annual Report. – The Department of Science and Technology shall submit a report on the implementation of the Program to the Office of the President and the Committees on Science and Technology of both Chambers of Congress annually.

SECTION 11. Implementing Rules and Regulations. The Department of Science and Technology shall formulate the Implementing Rules and Regulations (IRR) for the effective implementation of this Act within one hundred eighty (180) days from the date of effectivity of this Act.

SECTION 11. Separability Clause. – If any provision or part of this Act is held invalid or unconstitutional, the remaining provisions or parts unaffected shall remain in full force and effect.

SECTION 12. Repealing Clause. – All laws, executive orders, presidential decrees or issuances, letters of instruction, administrative orders, rules, and regulations contrary to or inconsistent with the provisions of this Act are hereby repealed, amended, or modified accordingly.

SECTION 13. Effectivity Clause. – This Act shall take effect fifteen (15) days after its publication in the Official Gazette or in a newspaper of general circulation.

Approved,