

Science for Evidence Based National Policies

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What is a policy?

A policy is a set of ideas or a plan of what has to be done in a particular situation that has been agreed upon officially by a group of people, a business organization, a government, or a political party. A policy includes a deliberate system of principles to guide decisions and achieve rational outcomes. Therefore, a policy is a statement of intent and is implemented as a procedure or protocol. Policies are generally adopted by a governance body within an organization or a country.

Public policy consists of three major types

1. Regulatory policy
2. Distributive policy
3. Redistributive policy

Each type of policy mentioned above has its own special purpose. A major goal of regulatory policy is to maintain order and prohibit behaviour that endangers society. The voting policy of Sri Lanka, the traffic ordinance et al are examples that come under regulatory policy. The distributive policies usually are implemented to encourage people to do certain activities. These

include granting of tax concessions for industries in order to encourage them to do more research and development work.

The focus of redistributive policies is on granting certain benefits to the community, group or company in order to encourage certain activities such as giving fertilizer subsidiary for Sri Lankan farmers.

What does the policy formulation process involve?

1. The identification of the policy issue
2. The formulation of a policy to address the issue
3. The adoption of the formulated policy
4. The implementation of the policy adopted
5. The evaluation of the policy after the implementation to assess whether it has addressed the issue
5. If it has not functioned as desired, the termination of the implemented policy.

In order to identify a problem which needs policy intervention or to formulate a policy, it is necessary to possess correct information which is called evidence. To find correct evidence it is necessary to conduct comprehensive research that gives evidence to correctly identify the policy issue and come up with reliable policies to address the issue under discussion.

Thus, the National Science Foundation has established a Science and Technology Policy Research Division (STPRD) to conduct policy research in the areas of Science and Technology. This functions with the intention to give policy recommendations and indicators to support policy planners and authorities who are involved in policy formulation in the areas of science and Technology.

Science and Technology Policy Research Division (STPRD)

The Science and Technology Policy Research Division (STPRD) was established by NSF in January 2005. This was set up with a view to establish a research arm in the areas of Science & Technology. As such, evidence based research data could be provided through the development of Science & Technology indicators. Its mission is to provide information on Science, Technology and Innovation (STI), education and other related fields to the policymakers and others nationwide. Also, to make the society aware of the important issues relevant to Science & Technology towards the economic development of the country and the general welfare of the society.



Fig.01 : Statistical handbooks published by NSF

The main focus of the STPRD has been made in the following directions;

The undertaking of Science, Technical and Innovation policy research in areas of importance in order to make recommendations towards policy formulation. The development of databases relevant to all sectors of STI which will be found useful in decision making.

The undertaking of public awareness programmes and discourses on nationally important issues related to the areas of Science, Technical and Innovation. Investigating, collecting, reviewing and consolidating Indigenous Knowledge (IK) that exists and practiced in Sri Lanka. The undertaking of capacity building of human resources especially in the areas of Social Sciences and Indigenous Knowledge.

Science, Technology and Innovation (STI) policy research

National Research Development and Innovation (RDI) Survey Science and Technology Policy Research Division (STPRD) has been conducting a regular Research Development and Innovation Survey once in two years since 2004. From 2013, the survey has been conducted

every year. It measures and reports the status of Science, Technical and Innovation in the country in terms of investment on Research, Development and Innovation, the engagement of Human Resources in the STI and the output of the Science, Technical and Innovation sector in spheres of publications, patents, technologies, innovations et al. The indicators generated in these surveys are useful for STI policy formulation, to address policy issues and gaps in the country. The policy recommendations that arise from these surveys provide insights to create an effective and productive RDI system in the country. The information provided in the handbook is used by policy planners, administrators such as those in Ministries of Science & Technology, Ministry of Finance, Central Bank, Department of Planning et al. The NSF also acts as the focal point in providing information to the United Nation Institute of Statistics to compile the Global report on Science, Technical and Innovation.

Tracer Study of Graduates and Postgraduates

The Science and Technology Policy Research Division of the NSF conducted several studies to measure the employability of Science & Technology graduates

and Postgraduates who passed out from the national universities. These Tracer studies have been used as a tool to examine the level of Science & Technology manpower required in the labour market at graduate level and to forecast demand and supply in the coming years. This in turn facilitates policy changes in relation to effective utilization of Science & Technology manpower.

National Innovation System (NIS) Studies

A national innovation system can be perceived as a historically grown subsystem of the national economy where various organizations and institutions interact and influence each other in carrying out innovative activities. Thus, Science and Technology Policy Research Division (STPRD) focuses on carrying out regular NIS activities to provide the necessary policy incentives towards the development of the Innovation system in the country. NSF's main focus is on small and medium scale industries in the country that have great potential for development and expansion.

Study of factors affecting research on social science

A survey to investigate the factors affecting research on social science in Sri Lanka commenced

in 2016. This survey was designed to investigate the cause of the poor quality and the low number of research studies in areas of social sciences and humanities. The recommendations based on the findings of the survey will be utilized to develop programmes to uplift research on social science in the country and thereby ensure the creation of a research culture beneficial for formulation of national development policies.

Collecting, Collating and Dissemination of Scientific information towards Policy Formulation and Research

Science and Technology Policy Research Division (STPRD) is developing and maintaining several databases.

Science and Technology Management Information System (STMIS)

The demand for information related to the capabilities in the various fields of the Science & Technology sector evolved due to the need for the application of knowledge in Science, Technology and Innovation in the economic development of the country. And also for the identification of indicators and pointers to develop policies. In order to face these challenges, information related to the Science & Technology sector



Fig.03 : Establishment of YSSF

was collected and collated in a systematic manner. And these were arranged in a more integrated form in order to link the capabilities of the Science & Technology personnel with other functions. These functions include services, training, research, development and infrastructure facilities in the Science and Technology Management Information System that has been established and maintained by the STPRD since 2004.

Directory on Social Scientists



Science and Technology Policy Research Division (STPRD) has launched a project to compile a Directory of Social Scientists in Sri Lanka.

The establishment of the Young Social Scientists Forum (YSSF)

NSF has undertaken an initiative to establish a Young Social Scientists Forum (YSSF) to provide a common platform for young Social Scientists to discuss and take initiatives to improve their performance besides taking part in national development activities. The forum will act as an incubator which provides the opportunity to develop research-ideas to fruitful research projects under

Fig.02 : Science & Technology information management system



Fig.04 : Collection & Validation of indigenous knowledge

the guidance of renowned senior scientists in the country.

The establishment of the Senior Social Scientists Forum (SSSF)

A Senior Social Scientists Forum (SSSF) has also been established at the NSF in order to get the active contribution and participation of senior social scientists in the research and programmes conducted by the NSF and also for the activities pertaining to the national Socio-economic development.

National Expatriate Scientists Database

A database has been developed on expatriate scientists who worked in different countries in the world and engaged in activities related to Science and Technology. The main objective of this is to obtain their contribution and collaboration towards national programmes.

Collection, Validation and Protection of indigenous knowledge (IK) which subsists in Sri Lanka

The sustainable development of a country should be closely linked with the conservation and sustainable utilization of biodiversity, making use of components of indigenous knowledge and practice of the country. Indigenous knowledge systems of the people of the world constitute a reservoir of knowledge of diverse areas that include a sound practical knowledge linked with the sustainable use of plant, animal, life on earth and beyond. Recognizing the importance of this, the Scientific Advisory Board to the Secretary-General of the United Nation decided at its third session in May 2015, to prepare a policy brief for the attention of the Secretary-General indicating the important role of Indigenous Knowledge for sustainable development and

providing recommendations for enhancing the synergies of IK and Science (UNESCO Science Report, 2015). Accordingly, the NSF Working Committee on Indigenous Knowledge works toward identifying, collecting and protecting of indigenous knowledge that had evolved and utilized over the last several millennium in Sri Lanka.



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