

## NIFS Technology Transfer Policy (four pages)

### **Background**

The National Science and Technology Policy (NASTEC) has recommended an effective technology transfer policy criterion. The NASTEC policy emphasizes "develop, or acquire and adapt, scientific knowledge and technologies for transfer to achieve progressive modernization of all sectors and enhance country's competitiveness in the world economy."<sup>1</sup>. The NASTEC technology transfer policy promotes high technology innovations considering small and medium entrepreneurs, global research and development collaborations in gaining appropriate technologies, and developing entrepreneurship among researchers. A dedicated technology transfer policy is released promoting the innovations of small and medium-scale entrepreneurs.<sup>2</sup> However, the fund allocations for the R & D sector in Sri Lanka reside on average below 0.2 % of the GPD a decade to 2020<sup>3</sup>. An efficient technology transfer process required secured intellectual property rights (IPR) protocols for new products. A national IP office (NIPO) is recently established in Sri Lanka with support from the World Intellectual Property Organization (WIPO)<sup>4</sup>. The majority of the research carried out in academia, and research organizations have a good potential for commercialization. To promote technology transfer, almost all national universities have established industry-academia interaction units to provide commercializing new products and offer expert advice to state and private sectors required<sup>5,6</sup>. The National Institute of Fundamental Studies (NIFS) established Technology Transfer Office very recently to bridge the widening gap between fundamental scientific knowledge required for product developments.

### **1. Scope**

The National Institute of Fundamental Studies Sri Lanka is mandated to conduct basic research of national importance and to collaborate with public and private institutions to develop research results into practical applications. The NIFS is also mandated to disseminate scientific knowledge among all sectors as and when necessary. THEREFORE, the NIFS technology transfer policy aligns with the National Science and Technology Policy objectives and NIFS mandatory framework. Recently, the NIFS established a Technology Transfer

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<sup>1</sup> National Science and Technology Commission, 2008. 5: Technology Transfer In National Science and Technology Policy, Ministry of Science and Technology, Sri Lanka, 30-33.

<sup>2</sup> Ministry of Industry and Commerce, National Policy Framework for Small Medium Enterprise (SME) Development, <http://www.industry.gov.lk/web/index.php/en/faqs/research-and-development.html>

<sup>3</sup> Reference needed

<sup>4</sup> <http://www.costi.gov.lk/index.php/id/research-to-commercialization>

<sup>5</sup> Kurt Larsen, Deepthi C. Bandara, Mohamed Esham, Ranmini Unantenne, 2016. Overview of university and industry collaboration in Sri Lanka.

<sup>6</sup> IMS. Weerasinghe and H.H. Dedunu, 2020. Contribution of academics to university-industry knowledge exchange: A study of open innovation in Sri Lankan universities, Industry and Higher Education, 1-11.

Office to fulfil such needs. The NIFS technology transfer policy comprises professionals in respective line ministries into NIFS research project formulations, expertise knowledge transfer, and establishing new research deemed necessary in solving pressing scientific problems of the nation. The NIFS technology transfer policy envisages minimizing overlap while maximizing collaborations with relevant sectors. Particular emphasis is also paid in formulating institutional policy to protect intellectual property rights and copyright transfers and the mediation of the NIFS TTO office. The NIFS technology transfer policy favours the establishment of endowment chair professorship and memberships for industry partners to utilize common resources, discuss scientific problems with peers, and access advanced laboratory facilities for measurements.

## **2. Aims/ objectives**

- 2.1 The aim of the NIFS technology transfer policy is to ensure scientific advice of competent authorities being sought before highest level decision making and identifying technology transfer avenues by the industries in state and private sectors.
- 2.2 Promote maximum number of research projects of the institute develop products, patents, intellectual properties, innovations to solve national problems.
- 2.3 Methodology development for technology transfer for state or private industries for commercial applications, and motivate scientists as well as creating a strong revenue route back to the institute for catalyzing further research and development activities. The technology transferring steps will be carried out transparently, considering all factors and placidly documenting the commitments of the institute and industry partners.

## **3. Technology Transfer Office (TTO) and its Mandate**

*Identifying NIFS new technologies and creating NIFS research and industry interface, coordination of technology transfer with the industrial sector for discussion, Patent, copyright and IPR proposals compilation, preparation of costing guidelines for technology transfer, and awareness of national problems and liaison with NIFS research groups. The mandate of the TTO office;*

*Develop firm interactions between NIFS researchers and state and private sector professionals through line ministry mediation to identify current sector problems that retard*

*national development programs and seek NIFS research experts advice to solve inherited scientific issues.*

*3.1 Ensure that NIFS research technology transfer is made adhering according to intellectual property rights protection regulations.*

*3.2 Ensure rights and legal protection of NIFS researchers in carrying out technology transfers of their scientific results findings for the nation's socio-economic development.*

*3.3 Develop endowed chair professorship sponsored using support from the industrial sector to provide a solution of priority project in national agenda.*

*3.4 Extend expert advice in developing technology incubators and pilot plants based on NIFS research findings results at relevant institutes as needed by the industrial sector.*

*Develop mechanisms to strengthen collaboration between NIFS research groups and industry by creating professional memberships at a nominal cost for industry personnel. The members will benefit by utilizing NIFS information, library, and problem discussions forums with NIFS professionals to enhance entrepreneurial thinking, enriching fundamental scientific knowledge in product developments.*

#### NIFS TECHNOLOGY TRANSFER POLICY AND NATIONAL COMPLIANCE

**Article 1** Develop a platform to ensure scientific advice of competent authorities being sought before highest level decision making and identifying technology transfer avenues by the industries in state and private sectors.

**Article 2:** Recommend mechanisms to render authority and autonomy to NIFS researchers in identifying the fundamental scientific knowledge gaps in technology development and transfer process ensuing adequate industrial controls.

**Article 3:** Incorporate relevant ministry or state authority professionals with the respective NIFS researchers (via the NIFS line ministry) from project inception, discovery to product development chain.

**Article 4:** Offer NIFS expert advice to the State through the line ministry to prevent and eliminate obsolete technologies that may adversely influence socio-economic development, environment and human health in Sri Lanka.

**Article 5:** Provide a platform to exchange views with academia and industry partners, e.g., Chambers of commerce etc., to facilitate NIFS research findings, technological know-how and encourage joint ventures

**Article 6** : A non-disclosure agreement must be signed before NIFS intellectual property rights, inventive output, research ideas, or proposals are revealed to an outside party. The other parties should accept the conditions and terms that have been specified.

**Article 7** : Promote small and medium scale entrepreneurs showcasing NIFS research findings and products and offer expert advice to overseen authorities when and wherever needed.

**Article 8** : Promote collaborative research with foreign institutes/ organizations enabling rapid technology transfer with adaptations of fundamental research developed at NIFS research laboratories.

**Article 9** : The technology implementation shall be use marketing features such as presentations, science publications, exhibitions and pitching events, preparation of Technology profile and making it available on the Institute web site , press release and technical write ups in trade journals , publicizing in social media, advertisement and seeking Expression of Interest from interested partners will be made by the NIFS TTO in consultation with the Principal Scientist.

**Article 10** : Ensure rigorous new technology assessment with an expert panel and evaluate such testimonies before transferring to safeguard institutional image.

**Article 11** : The articles above may subject modifications in compliance with the National Technology Transfer Policy and Science and Technology Policy of Sri Lanka.

## **POLICY IMPLEMENTATION**

**Article 12** : Any inventions made utilizing NIFS funds and other resources shall automatically becomes property of the institute. In case of a join invention in collaboration with external inventors, the resulted intellectual property still becomes a shared property of the NIFS. In any of the above cases, the TTO will make all logistic arrangements such as preparation of memorundm of understanding, drafting of leagal agreements etc. Non-patentable products such as computer software, databases etc. created by a NIFS inventor or a group as a part of the institutional duties shall automatically becomes a propoerty of the NIFS.

**Article 13** : Technolgy Transfer Office (TTO) shall review each intellectual property disclosure for commercialization potential, viability and novality by a competent authority as recommended by the Experts Committee appointed by the Director, NIFS and approved by the Board of Governors, NIFS. The TTO will also facilitate inventions to research investors

and industries. The technology must be implemented in accordance with the NIFS's approved standard protocols. NIFS has the exclusive right to periodically modify such protocols and provisions. This Committee also identifies the gaps and provides a report of gap analysis for consideration of the project team to take the project closer to what is expected in the Technology Transfer.

**Article 14** : The Invention experts committee comprises of NIFS principal inventor, the director TTO, subject expert, patent lawyer finance administrator and other professional as needed. The tenure of the experts committee is one year. If required the tenure of the expert committee can be extended by the approval of the Board of Governors, NIFS. The ex-officio positions of subject expert and the principal investigator differ based on the inventions at the discretion of Board of Governors, NIFS.

**Article 15** : The NIFS patents or intellectual property can be sold to the industry upon the approval of the Board of Governors, NIFS or Cabinet of Ministers, or Line Ministry of the Government of Sri Lanka when and where appropriate. The TTO will execute the procedure upon recommendation of expert committee as specified in the Article 12.

**Article 16** : A project awaiting Technology Transfer may have certain technical gaps and or may need certain specialized skill sets , facilities ,processes or materials for its success. In such situations, may Industrial Partner who provides these missing links either through own resources or by tapping other resources is preferred. Exclusive manufacturing rights of the intellectual property owned by the NIFS shall be given away to industrial partners. In such events the required legal agreement and a Memorandum of Understanding (MoU) between the NIFS and other parties will be promulgated by the TTO upon the advise of the experts committee. The ultimatum approval of the Board of Governors, NIFS for such transactions is required.

**Article 16** : Recommend monetary value of a NIFS technology developed by a valuation authority as defined in the applicable valuation standards. A standard method is used to assess the technology readiness level, and NIFS may decide to categorise it into phases.

**Article 17** Develop a mechanism to offer incentives to NIFS researchers who carry out appropriate products, processes, scientific know-how, software, field trials (this should not be limited to products, instead it should cover processes, technology know-how, software etc. including field trials, etc., development research leading to in commercialization and create revenue routes back to the institute for further research developments.

### **Article 18 :**

The main objective of Technology Transfer is to ensure that the fruits of research done in labs are ultimately translated as products in the market. In return for license rights granted to a commercial entity to make, use and sell the NIFS's IP, the institute shall seek royalty from the licensee. The time period and the exact percentage for the royalty fee subjected to a minimal ratio of 30 % (NIFS) and 70 % (External organization), should be decided upon agreement between the NIFS and the industrial partner and should be clearly stated in the MOU and legal documents.

### **Article 19 :**

A monitoring committee will be appointed by the Board the Board of Governors to assess post technology transfer activities. The committee comprises Principal NIFS Scientist, Director, TTO, Head or representative of the NIFS Finance Unit, and Head/ Representative NIFS Administration, Technology Expert.

**Article 20:** Royalties earned by any NIFS IP as specified under Article 18 shall be distributed among the institute, research programme, NIFS and external inventors. The dispersion proportions among aforesaid parties are proposed subjected to a cutoff value which can be varied by the Experts Committee decision based upon the recommendation of the inventor.

#### **Committee**

Property / product value LKR <=10 000 000.00		Prof Gamini Senevirathne
Inventors	(30%)	Prof. Siril Wijesundara
NIFS	(40%)	Prof. G.R.A. Kumara
Research program	(30%)	Dr. Athula Wijesinghe
Property / Product value > LKR 10 000 000.00		Dr. Shalini Rajakaruna (convenor)
Inventors	(20%)	Prof. Rohan Weerasooriya (Chairman)
NIFS	(60%)	
Research program	(20%)	

### **Article 21: Obligations of Industrial Partners and Support to Industrial Partner**

- i. The specific obligations and commitments of Industrial Partners is spelt out in the technology transfer license agreements. As a policy, the Industrial Partner is required to always inform the origin of the know-how from the NIFS. The Industrial Partner has obligation to display

- the words depicting that the technology is from the NIFS in the package and all publicity materials.
- ii. As a policy, NIFS supports its Industrial Partner as long as the product is in the market and the Industrial Partner is promptly making prompt royalty payments.
  - iii. Any support beyond what is committed in the agreement will be on a chargeable basis. The NIFS offers its testing charges to Industrial Partners at concessional rates.
  - iv. In the event of a failure, the Industrial partner needs to bear the loss for the investment and efforts put in by the partner's post technology transfer.

**Article 22: Breach of the rules of this policy**

Breach of the provisions of this Policy shall be dealt with under the normal procedures of NIFS in accordance with the relevant provisions of law.

**Article 23: Disputes and Appeals**

In the first instance, disputes shall be dealt with by the person or body designated by the NIFS. Within 20 days after receiving the concern, a decision must be made. If the disagreement/dispute cannot be settled within the allotted period, the parties may select a neutral arbitrator. If the dispute cannot be resolved within 30 days, it must be resolved by the parties by submitting to the jurisdiction of Sri Lankan courts.