

**INTERVENTION OF THE STATE INSTITUTIONS IN
SECURING THE CONTRIBUTION OF INVENTORS TO THE
NATIONAL ECONOMY**



Report No. PES/PE/INV/2014/04



AUDITOR GENERAL'S DEPARTMENT

PERFORMANCE AND ENVIRONMENT AUDIT DIVISION



CONTENTS

	Page
1. Executive Summary	1
2. Background	2
2.1 Introduction	3
2.2 Authority for Audit	4
2.3 Undertaking the Audit	4
2.4 Audit Objectives	4
2.5 Scope of Audit	4
3. Detailed Audit Findings, Implications and Recommendations	
3.1 Institutional Role	5
3.2 Different kinds of Assistance provided to Inventors	11
3.3 Evaluation of Inventors	18
3.4 Improvement of the Creativity among the Sri Lankan Youth	23
3.5 Marketing of Inventions Locally and Abroad	26
4. Conclusion	28

1. Executive Summary

Sri Lanka expects fast improvement of economic development through the implementation of a large number of development processes. Herein, the reason for the need to pay greater attention to inventions is the fact that the developed countries such as America, Japan, etc., have become leading players in the world economy through the creation of diverse inventions with high economic value. Our country has to pay a very high price for the Medical Equipment, agricultural and industrial equipment, chemical fertilizers, pesticides, etc., produced by these countries. In addition, there had been reports of the inappropriateness and harmfulness of such equipment, chemical fertilizers and pesticides to the environment of our country. In such circumstances, it is important to encourage the inventors of machinery and equipment and other essential goods that are suitable for our country in Sri Lanka itself.

The Sri Lanka Inventors Commission had been established under the Sri Lanka Inventors Incentives Act, No. 53 of 1979 for the encouragement of Sri Lankan Inventors whilst the National Intellectual Property Office of Sri Lanka had been established under the Intellectual Property Act, No. 36 of 2003 for the administration of registration of Patents for the protection of inventions. The objective of the audit is the evaluation of the contribution of those institutions for the empowerment of the inventors.

The Sri Lanka Inventors Commission is not having an adequate staff to enable the Commission to fully perform the functions devolved in it by the Sri Lanka Inventors Incentives Act, No. 53 of 1979 whilst the grant of financial aid, giving technical assistance and rendering legal assistance to the inventors had not been adequately fulfilled. The noticeable observations on the competitions organized with objective of encouraging the inventors is that most of the creations of the competitors are those that cannot command a very high market demand and the necessity for further technical improvements for introducing those to the market. Even though the Commission had identified the importance of encouraging the school students with regard to inventions, the progress on matters such as the establishment of Invention Societies in Schools, helping students to join international competitions, obtaining patents by school inventors and commercialization of inventions had not been at a satisfactory level.

The service provided by the National Intellectual Property Office of Sri Lanka to the inventors had not been satisfactory due to the reasons such as the very low level of referring the patents obtained in the process of the protection of invention for renewal, the delays in

the examination of applications made for patents, the delays in the input of data to the computer database and the non-supply of appropriate advisory services to the applicant for patents. It was also observed that an adequate staff was not available for the Patent Process.

The intervention of the State Institutions charged with the responsibility for the effective utilization of the inventions of the inventors to the national economy should be at an adequate level. The creation of a background in schools to generate creativity from the school education should be a basic requirement. These creations can be effectively utilized for the national economy through the identifications and implementations of the basic steps required for creation of inventions and the identification of inventors and encouraging them for such inventions.

02. Background

2.1 Introduction

The fast track march towards the economic development, Sri Lanka has created a period of stimulation for inventions. Even different media organizations are implementing programmes for introducing inventions and inventors and it is an auspicious feature of the development process of a country.

An invention is a practical concept of an inventor which would help in solving a particular problem in the field of technology. The Patent Right granted for the protection of inventions recognizes the creativeness and the inventor's rights for receiving the benefits therefrom. Such Patent Certificate issued by the Government to an inventor confers the inventor's sole ownership of the invention for the particular period of years. The Sri Lankan inventors have the right to obtain patent rights even in foreign countries.

If the inventors of any country concerned do not obtain the benefits of their creations, it is a great loss to the country concerned. When there is such interest shown on inventions at present in the country, it is possible to make such inventions contribute to the development of the country through the effective deployment of those inventions for the achievement of the economic development targets of the country.

An economic development of a country cannot be expected merely from the creation of inventions and subjecting those to evaluation. The appropriate deployment of those to contribute to the economic development is essential. Therefore a number of steps such as obtaining a Patent Certificate, the promotion of inventions, technology transfers, production and marketing should follow the introduction of an invention.

Sri Lanka Inventors Commission is an institution established under the Sri Lanka Inventors Incentives Act, No. 53 of 1979 for the encouragement of inventions of Sri Lanka, and since inception it had functioned under the Ministry of Trade. At present the Commission functions under the Ministry of Science, Technology and Research. The National Intellectual Property Office of Sri Lanka established under the Intellectual Property Act, No. 36 of 2003 performs the functions relating to the grant of Patent Certificates and the promotion of the trend towards creativeness.

2.2 Authority for in Audit

The audit was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka.

2.3 Undertaking the Audit

The improvement of the trend towards the contribution to the economy of the country by the young and adult citizens in the urban as well as the difficult regions of Sri Lanka through the display of their creative potential, obtaining effective productions to the country by the improvement and commercialization of inventions through encouraging inventors for the creation of inventions in areas of national importance, the use of local raw materials for the production, providing a solution to the unemployment of the country by the supply of employment opportunities and finally the development of industries of the country are expected. The performance of functions with the objective as the target in the past was revealed as not being at a satisfactory level for the deployment of most of the creations of the inventors of Sri Lanka to make a contribution to the development of the country. This audit was undertaken under such circumstances.

2.4 Objective of Audit

The objective of the audit is the evaluation of the contribution of the State Institutions for the empowerment of inventors and the protection of the rights of inventions.

2.5 Scope of Audit

- (a) Examination of the effectiveness of the policies and procedures followed by the Government institutions performing functions for the identification of inventors, encouragement of the inventors through the improvement of inventions and making those as inventions beneficial to the national economy.
- (b) The extent of the Performance Audit carried out was limited to test basis due to the time and human resources available for the audit and the audit examinations were limited only to the inventors subjected to evaluation.

03. Detailed Audit Findings, Implications and Recommendations

3.1 Institutional Role

The benefits that can be achieved by the national economy from the inventions created in Sri Lanka and through the creation of an environment conducive for the creation of inventions are immense. It is a recognized opinion that any country which has achieved its stability and prosperity, has so done from its own creations. As such the role of the institutions contributing to the creation of inventions and creating an environment conducive for the encouragement of those is very important.

3.1.1 Sri Lanka Inventors Commission

The Sri Lanka Inventors Commission is a corporate body established under the Sri Lanka Inventors Incentives Act, No. 53 of 1979 for the encouragement of the inventors of Sri Lanka and performs different functions with the objective of encouraging inventors. The following matters were observed in this connection.

- (a) According to the Strategic Plan for the years 2013 to 2015, the targeted number of Awareness Seminars to be held in the years 2013 and 2014 had been 10 and 15 respectively whilst the actual number of seminars conducted had been 4 and 5 respectively. Comparison of the actual position with the targets revealed the non-achievement of targets.
- (b) According to Sub-section 11(1)(i) of the Sri Lanka Inventors Incentives Act, “to publish and disseminate information about inventions, researches and science” in general is a function of the Commission. Nevertheless, it was observed from the Performance Reports of the Commission for the years 2012, 2013 and 2014 that such functions had not been performed.
- (c) Even though the Commission should hold regular monthly sessions in terms of Sub-section 11(1)(j) of the Act, for the exchange of ideas among inventors, the failure to take action to hold such monthly sessions was confirmed according to the Performance Reports of the Commission for the years 2012, 2013 and 2014.

Implication

The programmes that should be implemented for the inventors had not been successful due to the failure of the activities for the encouragement of the inventors to the targeted levels.

Recommendations

- (i) The conduct of adequate number of programmes for the creation of awareness among the inventors.
- (ii) The publication of the information on the inventors, researches and science in general in the Website of the Commission, the electronic and print media.
- (iii) Hold the monthly sessions regularly and provide opportunities for the exchange of ideas among the inventors.

3.1.2 National Intellectual Property Office of Sri Lanka

The National Intellectual Property Office of Sri Lanka established under the Intellectual Property act, No. 36 of 2003 is devolved with the powers relating to the Intellectual Property System and its administration. Among the objectives for which the National Intellectual Property Office was established, the matters such as the promotion of the creativeness of the nation, providing facilities for trading and the consolidation of the national economy to the knowledge prioritized global activity are important and that includes the registration and administration of patents for the protection of inventions.

In the marketing of an invention in the local and foreign markets for the invention to make a contribution to the economic development the protection of the invention is very important. As such the inventor is anxious to obtain the patent very quickly. The observations in this connection are as given below.

(a) Action on Applications received

When an application for the grant of a patent is made in the prescribed form to the Director General, in instances of fulfilling the requirements of Sub-section 78(1) of the Intellectual Property Act, No. 36 of 2003, the patent should be granted and forthwith record the particulars relating to the patent in the Register of Patents and issue the patent certificate to the applicant together with a copy of the patent

documents. The period of a patent expires twenty years after the filing date of application for its registration. In terms of Section 77 of the Act the date of receipt of the application will be deemed the date of filing of the application.

When an applications is made, the action thereon should be taken forthwith. Nevertheless, the information on 658 applications out of the applications received on which action had been taken at a very slow pace over period exceeding 2 years were revealed, whilst there were 195 applications delayed over periods exceeding 10 years. Among those applications, there were 22 applications received during the years 2010 and 2012 on which no action whatsoever had been taken. Justifiable reasons for such delays had not been furnished to Audit.

(b) Action on Deficiencies in Applications

When there are deficiencies in the applications made for a patent, action should be taken forthwith to inform of that to the applicant. According to Sub-section 77(2) of the Intellectual Property Act, No. 36 of 2003, where the Director General finds, at the time of receipt of the applications, that the provisions in Sub-section 77(1) have not been complied with, he should request the applicant to file the required correction within a period of three months from the date of such request.

Twenty instances in which informing the deficiencies in the applications delayed over periods ranging from 5 years to 11 years were observed. No action whatsoever on the informing of the deficiencies of those applications had been taken even by 27 February 2015.

Even though action should be taken forthwith to examine any deficiencies and inform the applicant, instances of delays ranging from one year to 4 years since the date of filing were observed in informing the applicants that 22 applications had been rejected.

(c) Renewal of Registration of Patents

In terms of Section 83(2) of the Intellectual Property At, No. 36 of 2003 where a patentee intends at the expiration of the second year from the date of grant of the patent to keep the same in force, he should, twelve months prior to the date of

expiration of the second and each succeeding year during the term of the patent, pay the prescribed annual fee and renew the registration annually. Even though 3,398 patents had been granted by the year 2012 only 518 had been renewed. As such it was observed that the percentage of renewal of patents had been at a low level of 15 per cent.

(d) Staff Management

An adequate staff possessing technical knowledge to examine the patent applications had not been attached to the Patents Division whilst 1,242 files pending examination had accumulated by February 2015. Further there were 518 files relating to renewals. The following matters were observed in this connection.

- i. An Intellectual Property Assistant Technical Officer and a Development Assistant only had been attached to the Division and as such it was observed that the staff attached was not adequate for the examination of the applications received by the Office.
- ii. The Intellectual Property Assistant Technical Officers had not received any training for examining and preparing reports on patent applications and that had an adverse impact on the performance of the Patents Division.

In view of the large number of files awaiting examination and the inadequacy of the existing staff, temporary staff had been deployed from time to time on the contract basis and trainee basis. Such deployment of temporary staff was observed as grossly inappropriate in view of the confidential nature of the work involved in the protection of patents.

(e) Patent Database

The following matters were observed in this connection.

- i. Even though the data of the National Intellectual Property Office were being entered into a computer database in the automation of the services connected with the Intellectual Property, that had not been completed.

- ii. Even though the Website of the Office had been limited to the World Intellectual Property Organization in order to improve the knowledge on the Intellectual Property, the Patent Database of the National Intellectual Property Office had not been linked to the Internet.

(f) Supply of Consultancy Services to Inventors

The following matters were observed in this connection.

i. Technical and Invention Co-operation Centres

Proposals had been made at the inception for the establishment of the Technical and Inventions Co-operation Centres, introduced by the World Intellectual Property Organization in order to encourage the dissemination of the results of creativity to the regional level, in association with the Regional Service Centres of the Ministry of Trade and Commerce. Even though subsequent plans had been made during the period from the year 2013 to the year 2015 to the establishment of these Centres in association with the Universities, the Nano Technology Institutions, the Sri Lanka Inventors Commission, etc., only 8 Centres had been opened in the year 2016.

- ii. Even though the documents required to be produced along with the Patent Application should be in English for entering into the database, it needs special consultancy. In view of the non-supply of such consultancy service to the inventors by the Office, the number of complete and accurate Patent Application had been the barest minimum.

(g) Registered Agents

An inventor may make an application for a patent through an Agent. In terms of Section 175 of the Intellectual Property Act, No. 36 of 2003 the Director General of the National Intellectual Property Office may register Agents. As such registration is valid for a period of 3 years, it is renewed for a further period 03 consecutive years on the payment of the prescribed fee. Accordingly, 38, 42 and 23 Agents had been registered in the years 2012, 2013 and 2014 (up to 15 September 2014) respectively. The following matters were observed in that connection.

- i. According to the Notification published in the Gazette Extraordinary No. 1445/10 of 17 May 2006 the Director General has the authority to hold an examination for the recruitment and registration of Agents, by himself or with the assistance of the Sri Lanka Law College or the Sri Lanka Institute of Development Administration. Nevertheless, action had not been taken for holding such examination either for the recruitment or for registration of Agents.
- ii. Where Lawyers of the Supreme Court of Sri Lanka are appointed as Agents in terms of Section 175 of the Act, provisions had not been made for the recovery of fees made by there from the applicants for patents. As such it had been possible to recover fees at different rates.

Implication

- i. In view of the long time taken for the registration of patents, the inventors confidence in the Patent and the importance of the Patent in the commercialization of the invention had diminished.
- ii. The inventors had not received an efficient service due to the reasons such as the formulation of laws and rules, regulations of Patents, computerization, establishment of Technical and Inventions Co-operation Centres, failure to recruit suitable Officers and formal action on Agents not being in operation at full level.

Recommendations

- i. Recruitment of adequate number of appropriately qualified officers to the Patents Division and in the interim deploy temporarily the officers in the Industrial Designs and the Trade Mark Divisions who are trained abroad in patents, temporarily in the Patents Division in order to finalize the work on the delayed applications.

- ii. Take action to provide adequate consultancy services and translation services to the Applicants for Patents.
- iii. To expedite the establishment of the Technical and Invention Co-operative Centres and appoint officers with appropriate qualifications.
- iv. To link the database of the National Intellectual Property Office with the Internet and computerize the data on patent completely.
- v. To hold the competitive examination for recruitment of Agents and recruit Agents with technological knowledge.
- vi. Determine the fees charged by Agents from Inventors and prescribe concessionary fees.

3.2 Different kinds of Aid supplied to Inventors

3.2.1 Grant of Financial Aid to Inventors

The following matters were observed in this connection.

(a) Sri Lanka Inventors Fund

In terms of Sub-section 11(1)(b) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979, financial aid should be granted to inventors to enable them to develop, perfect and produce their patented inventions or those which are pending patent in order to further encourage such inventors. The opening balance of the year 2013 of this Fund established with the above objective amounted to Rs.2,543,450 and provision amounting to Rs.3,500,000 had been made available to the Fund in that year from the Science and Technology Development Division of the Ministry of Science and Technology. The Fund had spent a sum of Rs.2,041,629 in that year for the improvement of the inventions of the Inventors. The balance of the Fund as at 31 December 2013 amounted to Rs.4,001,821 and the Ministry had made available provision of Rs.8,000,000 for the year 2014. Accordingly, the balance of the Fund as at 31 December 2014 amounted to Rs.10,484,297. As such action had not been taken for the utilization of the full amount for the improvement of the inventions of the Inventors.

(b) Grant of Financial Aid to Inventors

The Sri Lanka Inventors Commission had paid a sum of Rs.2,937,176 as financial aid in the years 2013 and 2014 under the Programme for the Grants of Funds for the Promotion of Inventions as shown below to 8 applicants selected for finance aid out of 40 applicants.

<u>Invention</u>	<u>Financial Aid granted</u>
	Rs.
Carbonic Pesticide	240,000
Ground Nuts Crusher	50,000
Carbonic Fertilizer	1,062,200
Model Showing action of Human Limbs	100,000
Ekel Cleaning Machine	25,000
Onion Slicer	50,000
Equipment for Disabled Persons	1,209,976
Environment Friendly Children's Sporting Equipment	200,000

	2,937,176
	=====



Ground Nut Crusher of a School Inventor

(c) Arranging Loan Facilities to Inventors

According to Sub-section 11(1)(d) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979, recommending to Government lending institutions inventions that are beneficial to Sri Lanka so as to enable such institutions to give long term loans to inventors to manufacture their inventions, with only their patents, as security, the amount of such loan to be granted depending upon the importance and market of their inventions is a function of the Commission. Herein the value of the loan granted to the Inventor should be determined by the Commission. The observations in this connection are given below.

- i. The Commission had granted loans to the Inventors from the years prior to the year 2012. Even though such loans should be settled from the benefits derived after the commercialization of the inventions and the grant of loans had been ceased due to the Inventors defaulting the settlement of loans. Subsequently, the Commission had established the Sri Lanka Inventors Fund in terms of Sub-section 22(1) of the Act and granted financial aid for the improvement of the inventions. Further particulars in this connection appear in paragraph 3.2.1(b).
- ii. According to the replies furnished for a questionnaire issued to 30 Inventors evaluated at the 'Sahasak Nimavum' Exhibition held in the years 2012 and 2013, it was observed that the Inventors need financial aid for further improvement, manufacturing and marketing of inventions.

Implications

It had not been possible to make the inventions to contribute to the national economy as the Inventors do not have adequate financial capacity to enable them to improve and commercialize their inventions.

Recommendations

- i. To provide long term financial assistance to the Inventors to commercialize their inventions as well as the full utilizations of the Sri Lanka Inventors Fund.
- ii. To implement a formal follow-up process of the Inventors even after providing the financial assistance.

3.2.2 Provision of Technical Assistance to Inventors

According to the Sri Lanka Inventors Incentives Act, No. 53 of 1979, providing laboratory facilities and technical assistance to the Inventors is out of the functions of the Commission. The observations in this connection appear below.

(a) Action on Requests made for Technical Assistance

Six requests made by Inventors for technical assistance for the improvement of their inventions had been referred by letter to the respective institutions. Any information on those inventions thereafter was not available.

In view of the above situation the adequacy of intervention on the inventions cannot be admitted as no follow-up action on subsequent development had not been taken.

(b) Action on Inventions that need further improvements

As seven inventions submitted for the 'Sahasak Nimavum' Exhibition of the year 2012 had not been fit for introduction to the market, those needed to be further improved by using new technology, manufactured in a manner to attract the consumer choice. Those inventions had not been commercialized as an institution had not

volunteered to provide the technical assistance to make them commercially viable inventions.

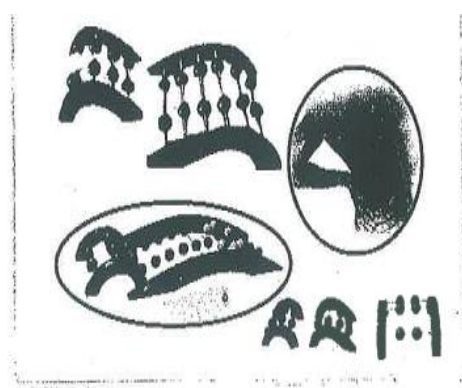
Even though all these new scientific findings had been evaluated the opportunity available for the further encouraging the Inventor or the additions of another effective product to the country through those creations had not been properly made use of.

- (c) An equipment created by an Inventor who received honorary mention at the ‘Sahasak Nimavum’ Exhibition of the year 2012 which could be used for curing spinal column pains had been successful. The Assistant Commissioner (Technical) of the Department of Ayurveda had, by letter No. 6-1-3-11 dated 22 November 2012, stated that it could be further improved and used on patients. Even though the equipment had been manufactured using further parts needed to enable easy use by the patients, an opportunity was not available for its commercialization or for use by patients. The Inventor had made a request for a land to construct a building for the admission of patients as the Inventor himself has to cure the patients systematically.

Assistant Commissioner of Ayurveda (Technical) had informed the Inventor on 01 July 2013 that the recommendations for carrying out further chemical tests had been given to the Ayurveda Teaching and Ayurveda Research Institute. Nevertheless, the recommendations of the Department of Ayurveda for the use of this equipment on patients had not been received even by December 2015.

**පිටි කොන්දුව සහ බෙල්ලට් සහනය දෙන
සෙහිසි ටෙක් උපකරණය**

මෙම විශේෂ උපකරණය මගින් වැරදි
ඉරියව්වක සිටීමෙන් බර ඉතිලීමෙන් ඇද
වැටීමකින් හෝ තැල්මකින් බෙල්ලට් හෝ
කොන්දුව ඇතිවන වේදනාව සමනය කරයි.
උපකරණයේ බෝල ආධාරයෙන් ස්නායු
තෙරපුම සහ රුධිරවාහිනි තෙරපුම ඉවත් කර
වේදනාව සමනය කරයි. ඔබ කළ යුතුව
ඇත්තේ විනාඩි 15 - 30 ත් අතර කාලයක්
මෙම උපකරණය මත වැහිරී සිටීමය.



(d) Intervention for Obtaining Patent

Giving technical assistance to the Inventors is one of the objectives of the Commission and in terms of Sub-section 11(1)(a) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979, giving technical assistance to Inventors after examination of their inventions to determine their patentability and help them prepare patent applications under such terms and conditions as may be specified by the Commission is a function of the Commission. The observations in that connections are given below.

- i. Even though a Patent Examining Division had been established in terms of Section 21 of the Act for carrying out the necessary examination of the applications for patents, a separate officer had not been appointed to assist the Inventors in the preparation of Patent Applications whilst only 2 officers of that Division had been provided with training in the preparation of applications for patents.
- ii. In terms of Section 13 of the above Act, the Industrial Technology Institute or any other Government Research Institution should make available the laboratory facilities to Inventors or Researchers who may need the same as recommended by the Commission. All expenses incurred by any such institution in making available laboratory facilities to the Commission should be charged to the Commission. Nevertheless, a course of action for making available such laboratory facilities to the Inventors had not been implemented up to date whilst the plans for such course of action in the future had not been prepared.
- iii. In terms of Sub-section 11(1)(g) of the above Act, the establishment and maintenance of a public research laboratory and experimental station where authorized Inventors and Researchers may avail themselves of its facilities and services for carrying out or perfecting their approved inventions and researches is a function of the Commission. Nevertheless, such place providing facilities to the Inventors is not available up to date whilst the plans for the establishment of such plan in the future had not been prepared.

3.2.3 Rendering Legal Assistance to Inventors

Legal assistance should be rendered under such terms conditions as may be specified by the Commission to Inventors by representing them in filing their patent applications in Sri Lanka or abroad and by protecting their secured patents from infringement in patent cases. In terms of Section 21(1) of the Sri lanka Inventors Incentives Act, No. 53 of 1979, a Legal Division should be established. Nevertheless, such Legal Division had not been established up to date whilst the post of Legal Officer had not been included in the approved Cadre List.

In view of the inability to appear for the rights of the Inventors due to the failure to establish a Legal Division under the Sri Lanka Inventors Commission it had not been possible to make an active intervention for the rights of the Inventors.

Implication

The inadequacy of the technical and legal assistance needed for the encouragement for the creation of inventions, providing protection and making a contributions to the national economy through the commercialization of the inventions has become an obstructions in the encouragement and protection of Inventors.

Recommendations

- i. Recruitment of suitable officers to enable providing technical and legal assistance for inventors.
- ii. Assisting in the creation of an awareness of the inventions among the public.
- iii. Expansion of the follow-up activities on such creations after the supply of technical and legal assistance.
- iv. Take action to provide the laboratory facilities and other services of the Industrial Technology Institute or any other research institution of the Government to the Inventors who require such services.

3.3 Evaluation of Inventors

The encouragement for the making or creation of inventions by citizens of Sri Lanka is an objective of the Commission. In terms of Sub-section 11(1)(f) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979, it is a function of the Commission to encourage Sri Lanka Inventors to make known their inventions by giving annually sizeable cash awards and medals to be known as Presidential Awards for Inventions to patented inventions in Sri Lanka in the fields of agriculture, chemistry, medicine, national defence, pharmacy, physics, public safety and welfare, public works, transportation and such other fields of science and technology. The particulars of several special programmes which had made such evaluations are given below.

3.3.1 Sahasak Nimavum Exhibitions

‘Sahasak Nimavum’ Exhibition which is a Sri Lankan National Inventions Exhibition is conducted annually by selecting the inventions at the Provincial level, held for the Inventors to show their capabilities to the nation, obtain their honors and to meet the inventors on the same stage.

The Commission appoints the Panels of Judges in order to ensure that every invention is subjected to judgement under a recognized process.

The following observations are made in this connection.

(a) Fields Represented in the Exhibition

‘Sahasak Nimavum’ Exhibition is held annually for the exhibition of the new creations of Inventors in the Open, Universities, Schools and Commercial Sectors under 22 universally recognized fields. The observations thereon are given below.

- i. The overall new creations presented in the years 2013 and 2014, as compared with the year 2012, indicated negligible and sharp decreases of 9 per cent and 73 per cent respectively. Even though 600 inventions had been targeted for the year 2014 in the Strategic Plans for the years 2013-2015, the actual

number of inventions presented had been 226, and as such the targets had not been fulfilled.

- ii. It was observed that the participation of the Inventors of the Open, Universities and Schools Sectors in the year 2012 had decreased over 60 per cent. The participation of the Schools Sectors in the years 2013 and 2014, as compared with the year 2012, had decreased sharply as 53 per cent and 88 per cent respectively. The reasons for that had been the change of the criteria used for selection for the exhibition as well as normal decrease in participation for competition.
- iii. A noticeable feature observed in this connection had been the higher percentage of representation of the floor-level inventions which cannot expect high market demand presented by the Open and Schools Sectors and the lower percentage representation of Inventors that can expect a market demand presented by the Commercial Sector.

(b) Presenting Inventions

Opportunities had been available to present inventions under 13 different fields for the 'Sahasak Nimavum' Exhibition of the year 2014.

Even though the creations from these Sectors had been comparatively at low level, the number of creations evaluated had been at a very satisfactory level.

The Commission had recognized the fields such as the equipment for disabled, food security, environment protection, energy protection, protection of humanity, teaching aid and substitutes for imported goods as the Sectors of national importance. The representation of the equipment for disabled, the environment protection and the teaching aid at this exhibition had been at low percentage of 4 per cent, 8 per cent and 6 per cent respectively.

(c) **Evaluation of Inventors**

The winners of the first, second and third places in the above fields by a Panel of Judges appointed by the Commission are awarded cash rewards and certificates. The best creation of the Inventors Competing in the 'Sahasak Nimavum' Exhibitions is given cash award of Rs.750,000 and a Certificate for the "Dasis Award". Those 'who win the first, second and third places for inventions in the major sections of the national awards, namely, the Schools, Open, Universities, Technical Colleges and Commercial are given cash awards of Rs.100,000, Rs.50,000 and Rs.25,000 and certificates respectively. A cash award of Rs.200,000, A Cup and a certificates are given for the best creation selected under the Technology fields. Even though there were 52 competitions under 13 fields selected, contestants had not participated for 6 competitions. Even though there were 102 winning chances of the first, second and third places in 34 contests for contestants in 34 contests except the schools sector, there were only 47 winners. The reason observed in that connection was inventions suitable for awards had not been presented.

Implication

In considering the invention sectors recognized and the inventions created there was a decrease in the number of creations in the years 2013 and 2014, lack of creation which could expect a market demand and the creation in the fields recognized as nationally important being at the minimal level, indicate that the contribution to the national economy had not been at a satisfactory level.

Recommendation

- i. Encourage presenting inventions which could expect a market demand to the 'Sahasak Nimavum' Exhibition.
- ii. Paying attention to the new computer programmes and inventions related to the computer field and there by encouraging inventors for inventions in the same field.

3.3.2 Presidential Awards

According to Sub-section 11(1)(f) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979 Presidential Awards is held annually to encourage Sri Lanka Inventors make known their inventions by giving annually sizeable cash awards and medals to be known as the Presidential Awards for Inventors to patented inventions in Sri Lanka in the fields of agriculture, chemistry, medicine, national defence, pharmacy, physics, public works, transportation, public safety and welfare and such other fields of science and technology.

- (a) Even though the Presidential Awards for Inventions should be held annually, a decision had been taken to hold the Award Ceremony once in two years as a minimal number of applicants participating therein due to the decrease in the number of inventions with patents. The participation of applicants in the Presidential Awards in the years 2012, 2013 and 2014 had been 29, 44 and 17 respectively.
- (b) Inventors had been recommended only for the Geneva International Awards Ceremony and awards for 4 new inventions had been received in the year 2014.

3.3.3 Fair Judgment

The Panel of Judges engaged in the evaluation of inventions should have the capacity for carrying out impartial evaluation in arriving at their judgement of the Inventions Programmes and Workshops on the instructions and advice aiming at the above object should be organized.

- (a) Accordingly, a Workshops on judging inventions had been held on 3 May 2013 at the Savsiripaya Auditorium at a cost of Rs.135,318 and the participation from Schools, Universities and Technical Colleges Sectors had been 51 per cent, 75 per cent and 79 per cent respectively.
- (b) There were 2 complaints that fair judgement had not taken place due to lack of specific criteria and rules and regulations.

Implication

- i. Discouraging inventors due to the failure to follow the rules and regulations relating to judging the competitions.
- ii. Non-participation in future competitions due to unfair judgement.
- iii. Loss of confidence of the Inventors in the Sri Lanka Inventors Commission.

Recommendations

- i. Formulation of a Manual of Instructions on specific Rules and Regulations for Judging Competitions.
- ii. All Judges should generally follow in Manual of Instructions.
- iii. Ensure that the Judges of the Panel of Judges do not have any close relationships with the competitors.

3.3.4 Phoenix Project

Due to the unexpected fire that occurred at the inauguration of the 'Sahasak Nimavum' National Inventors Exhibition held from 30 November to 02 December 2013, the exhibition and competitions of the Universities, Open and Commercial Sectors could not be held. Out of 839 inventions put for exhibition 178 inventions had been destroyed by the fire. In consequence, the Commission had made an appeal under the Phoenix Project to all generous Sri Lankans to render their assistance in different manner to improve and carry forward to commercialization of the inventions destroyed by the fire.

Accordingly, from the monetary aid given by the Private Companies, a sum of Rs.4,425,243 had been given to the Inventors to restore 151 inventions to the normal condition. Nevertheless, information of assistance provided to 27 Inventors for the built up of the prototypes of their inventions was not made available to Audit. Even the cheques valued at Rs.72,910 issued to 20 persons had been retained as they had not collected the cheques.

Implication

Even though compensation under the Phoenix Project had been provided for the inventions destroyed by the fire, whether the built up of prototypes could not be established whilst the incident has become a reason for discouragement of Inventors.

Recommendation

Preparation of a formal course of action to ensure the protection of the exhibits displayed at such exhibitions.

3.4 Improvement of Creativity among the Sri Lankan Youth

According to Sub-section 11(1)(l) of the Sri Lanka Inventors Incentives Act, No. 53 of 1979, the organization of creative societies in schools, colleges and universities to promote and encourage creativeness among the Sri Lanka Youth is a function of the Commission. Even the Commissioner of the Commission had by his special letter, emphasized the importance of increasing inventions and creativeness through the schools. The Commission is carrying out activities such as the establishment of invention societies in schools, conduct of awareness programmes, conduct of exhibitions and competitions on inventions at the Zonal Level and the Provincial Level and television programmes on Invention Circles in order to induce the school children to create inventions. The following matters were observed in this connection.

3.4.1 Establishment of Youth Invention Societies in Schools

In co-operation with the Commission, the Ministry of Education had taken action through its Circular No. 2006/23 dated 06 June 2006 for the establishment of Youth Inventions Societies in all IAB, IC and 2 Schools throughout the Island, conforming to the new trends in the modern world, to ascertain the school students creativity, to introduce the new creations resulting therefrom to the local level and international exhibitions and for commercialization of their creations by obtaining patents for their creations. The following observations were made in that connection.

- (a) Even though there were 6,669 schools of the IAB, IC and 2 categories throughout the Island, out of the targeted 1,550 Schools Invention Societies for the year 2014 included in the Strategic Plan for the years 2013 to 2014 the actual number had been only 116.
- (b) The percentage of winners out of the exhibits of the above 3 categories of schools produced for the competitions in the years 2012, 2013 and 2014 had been at a minimal level of 8 per cent, 4 per cent and 1 per cent respectively and as such it was observed that there was no creation of inventions of national importance.
- (c) The facilities for the registration of traditional schools inventions in the website of the Commission had been provided from the year 2012. Even though the portals allocated to each school in the Young Inventors Club Portal of the Website should display the information on the members of such clubs, it had not been so done.

3.4.2 Inventors Societies Television Programme

The Television Programme on Invention Societies commenced in the year 2013 with the objective of increasing the creativity of school students and popularizing the Schools Inventions Societies had telecasted 32 programmes in the Independent Television Network and 54 Schools Invention Circles had participated in the programme. The expenditure incurred thereon in the years 2012 and 2013 amounted to Rs.4,063,021 and Rs.443,774 respectively. It was observed that the Circles of the Inventors of the Schools in the North Central and Northern Provinces had not been participated in the programme.

3.4.3 Inventions Created at School Level

An analysis of the information obtained through the questionnaire issued to 6 Inventors evaluated at the school level revealed that the further improvement and commercialization of their inventions had not materialized. Out of the reasons adduced in that connection, the non-receipt of technical assistance needed for the improvement of the creations, lack of financial resources and the inventors withdrawing from the invention due to being engrossed in studies had been the major reasons. Further it was observed that the contribution of the Government institutions which can intervene in this connection is also inadequate.



Paddy field ridge paring machine



Framework of Paddy Field paring machine

Implication

- i. School Inventors not making use of their inventions as they are not encouraged to obtain patents.
- ii. School Inventions Societies are not functioning adequately. Inventions of the Youth are not adequately encouraged due to the inadequate enthusiasm of the University Teachers and the School Teachers.
- iii. The inadequacy of encouragement of creativity at the school level could result in the decrease of the creation of inventions useful for the country.

Recommendations

- i. Provide in necessary resources and facilities for the encouragement of new inventions at the school level.
- ii. Instead of being limited only for the award of cash and rewards, intervene in the introduction of Inventors to the institutions which can assist in improving inventions.

3.5 Marketing of Inventions Locally or Abroad.

Assisting the Inventors for the marketing of inventions locally or abroad is of importance in obtaining a higher contribution to the national economy from the Inventors. The ways and means of obtaining the capital, market and technology needed by the Inventors for commercialization of their inventions should be created. The observations in this connection are given below.

3.5.1 Need for Publicity

Publicity in the market of the modern times in the introduction and retention of an invention or any other kind of goods in the market is a noticeable feature. Nevertheless, the producers are unable to meet the publicity need in addition to maintaining the quality and importance of the article. Providing the facilities for publicity needed for such creations is another form of assistance that can be provided to the Inventors.

3.5.2 Lankan Angel Network

The most effective methodology made use of in the world to bear the heavy risk the Inventors have to face in the commercialization of their inventions is attaching them to the Angle Network.

The Commission maintains this programme as the Lankan Angel Network. Even though the targeted number of successful Inventors according to the Strategic Plan for the years 2013 to 2015 had been 5, only one Inventor had been selected through the participation of 30 applicants. In this connection, the language had been a problem and the Commission could not provide any assistance to the Inventors for the preparation of the necessary documents.

Implication

In addition to the non-receipt of any special assistance by the Inventors for the preparation of documents, the number of Inventors making use of the programmes such as the “Lankan Angel Network” had been very few due to not being adequately aware of such programmes.

Recommendations

- i. Preparation of a course of action for carrying out publicity programmes on inventions among the consumers.
- ii. Increase the opportunities available for a larger number of Inventors to commercialize their inventions through the proper implementation of the programmes such as the Lankan Angel Network.
- iii. Identify the Inventors important for the national economy and prepare a course of action to encourage them continuously.

4. Conclusion

- i. It is concluded that inventions could not make useful contribution to the national economy due to the inability of the Commission to provide the financial, technical and legal assistance at an adequate level to the Inventors for carrying out improvements and commercialize their inventions.
- ii. It is concluded that there is a possibility of a decrease in the creation of inventions beneficial to the country in the future due to the prevailing inadequate level of activities of the School Invention Societies, the inadequacy of enthusiasm of the Teachers and the failure to encourage the school Inventors to obtain patents.
- iii. It is concluded that the confidence of the Inventors or the patent and the importance of the patent in the creativity have diminished due to the inordinate times taken for the registration of patents.
- iv. It is concluded that an efficient service had not been made available to the Inventors due to the reasons such as the registration of patents, computerization of data, the establishment of Technical and Inventions Co-operative Centres and the creation of awareness among the Inventors not being at an adequate level.