Rubber Research Institute of Sri Lanka

Action Plan 2022

Content

RUBBER RESEARCH INSTITUTE OF SRI LANKA

Introduction

The origin of rubber research in Sri Lanka goes back to 1909, when a group of planters in the Kalutara District got the service of a chemist to study the coagulation of rubber. This was later expanded to form a Rubber Research Scheme in 1913 and then named as the Rubber Research Institute of Ceylon (now Sri Lanka) in 1951showing that the Rubber Research Institute of Sri Lanka (RRISL) is the oldest Research Institute on rubber in the world. It has a proud record of service to the industry, in plant breeding, agro-management practices and the chemistry of raw rubber.

RRISL is the nodal agency in Sri Lanka having the statutory responsibility for research and development on all aspects of rubber cultivation, processing and product development for the benefit of the rubber industry. The institute carries out research on agronomy and biology of the crop, the chemistry of natural rubber and technologies of product manufacture together with environmental and socioeconomics aspects of all subsections. Further, the institute is committed towards technology transfer activities and training of extension personnel and other stakeholders. Accordingly, it has five biological research Departments. i.e. Plant Science, Genetics & Plant Breeding, Plant Pathology & Microbiology, Soils & Plant Nutrition and Biochemistry & Plant Physiology and four chemistry Departments i.e. Raw Rubber Processing Development & Chemical Engineering, Raw Rubber & Chemical Analysis, Polymer Chemistry and Raw Rubber Technology & Development and then Advisory Services Department for technology transfer together with Units for Adaptive Research, Biometry, Agricultural Economics and Audio Visual & Information Technology.

Organizational Structure and Arrangements

The organizational structure is summarized in Diagram 1- (page10).

Assignment of Responsibilities, Authority and Accountability

The Director as the Chief Executive Officer of the Institute is responsible for all the research and development activities, and administrative and financial affairs of the Institute under the general direction and control of the Rubber Research Board. The responsibility and authority for execution of the research, advisory and administrative plan of each department lies with the Head of the relevant department/section. The Deputy Directors are expected to assist the Director and Additional Director in discharging their executive functions in the relevant subjects.

Authority of the Organization

According to the Rubber Research Ordinance (No. 10 of 1930), a Rubber Research Board has been established for the purpose of furthering and developing the rubber industry. The Board governs a Rubber Research Institution with the view of managing, conducting, encouraging and promoting scientific research with respect to rubber cultivation, processing and product manufacture and also, dealing with all issues connected with the rubber industry. The areas covered are development of new clones, production of quality planting material, cultivation and management of rubber plantations, prevention and cure of diseases, pest control , harvesting rubber trees for latex, soil and moisture management, rubber based farming systems, expansion of rubber cultivation to new areas and impact assessment on rural livelihood, carbon sequestration & environmental impacts, raw rubber processing and conversion into marketable products, treatment of rubber factory effluents and providing of advisory services. This Ordinance has been amended from time to time; the most recent introduction has been the “Rubber Research Bill Part II of April 2003 with the amendment No. 28”.

Our Clients

Management staff and workers of all Estates and Smallholders are important clients of the institute. Close links have been established between all these groups by constant interactions. The raw rubber and rubber product manufacturers, the consumers of raw rubber and raw rubber latex exporters are the other groups of institute’s clients. Along with other sister organizations such as Rubber Development Department and Thurusaviya Fund, RRISL caters to the needs of the smallholders and assists them in selling latex to centrifuged latex factories or in producing quality smoked sheets. Emphasis is given for marketing of rubber and also to introducing new technologies to rubber growers and small scale industrialists. Further clients are supported with trouble shooting and testing facilities.

THE VISION, MISSION STATEMENTS AND OBJECTIVES

Vision and Mission

The institute's vision is to emerge as the center of excellence in providing high quality scientific technologies to the rubber industry. Its mission is to revitalize the rubber sector by developing economically and environmentally sustainable innovations and transferring the latest technologies to the stakeholders through training and advisory services.

Objectives

The broad objective of the RRISL is to assist the Government of Sri Lanka (GoSL) in the sustainable development of the rubber industry by providing required technologies. Based on the policy for the Plantation sector, we expect the rubber industry in the country to be competitive in the international arena by capturing significant market share and also assuring decent living of plantation community in the country. Strategies proposed to be implemented are given below.

- Considering the existing level of popularity for rubber in the area, suitability and land availability for further expansion, two regions for rubber cultivation in the country are identified for focus oriented R&D activities.

    - ❖ A rubber triangle comprising Kalutara, Ratnapura and Kegalle districts is identified as a mega zone for rubber cultivation in the traditional rubber growing area. Since spare lands for further cultivation of rubber in this zone is limited, productivity increase is the focus in this zone. RRISL will provide sufficient technologies and suitable protocols targeting an average productivity of over 1500 kg/ha/-year by 2025 in this zone. To be competitive at international level, cost of production is expected to be kept below USD 2/kg for plantation companies. In line with other development programmes of GoSL, RRISL assist small & medium scale entrepreneurs to set up rubber industries in environmentally friendly manner by providing required technologies to do so.

    - ❖ Another mega zone for rubber in drier climate comprising Monaragala, Ampara districts and Anuradhapura is identified to expand the rubber cultivation for increased production. Whilst assisting GoSL to meet a target of 30,000 ha of rubber in this region, RRISL will provide improved protocols to maintain an average productivity level of 1500 kg/ha/year by 2025. Solar energy is promoted as the principal energy source for rubber industry in this zone. Also, rubber is promoted in this zone as a means of sequestering atmospheric CO_2 targeting carbon trading in voluntary market. Farming system approach is encouraged to increase land use efficiency and farmers' income further.

- In addition to above the two mega zones, RRISL is engaged in promoting rubber in other regions of the country on demand basis.

- In order to meet the targets set in above approaches, agronomic research are focused on developing sustainable and user-friendly agronomic practices and disease resistant, environmentally robust high yielding genotypes for improved productivity and greater level of farmer acceptance. Rubber technological research will cater mainly the small & medium entrepreneurs and develop products for high level of value addition and for niche markets. Also, information is generated with required technologies to promote rubber as an environmental friendly industry. Further, impact guaranteed technology programmes are advocated mainly in mega zones in support of achieving set targets.

Research Departments/Units

Research departments & units of RRISL are to carry out research and development work and dissemination of outputs to the relevant sectors through extension network in view of meeting the objectives through the strategies mentioned. Considering the upstream and downstream segments of the industry, they are categorized into two as rubber agronomy and technology.

Agronomy

Agronomy departments conduct research and development activities on all aspects of the growth of the rubber tree and its productivity. Research activities on breeding clones for high yields, disease resistant, vigorous growth, tolerance to gaseous stimulation and increased timber production are given the highest priority. Also, reduction in cost of production with efficient uses of resources is the key focus in research. Further, research and development activities have been commenced on the expansion of rubber cultivation to nontraditional areas. The Advisory Services Department is catering to the needs of the smallholders. Whist Genetic & Plant Breeding Department is located at Nivithigalakale substation, Mathugama, other four biological research departments and three supporting units are functioning at Dartonfield, Agalawatta. The Advisory Services Department is located at Telawala Road, Ratmalana.

1. Genetics & Plant Breeding Department

Main objective of this department is to develop clones with high yield potential combined with desirable secondary characters. In order to achieve this, clones are produced by hand pollination and resulting new genotypes are tested first under small scale and then in collaboration with estates and also under smallholder conditions. Among the secondary characteristics; growth vigour, tolerance to diseases, resistance to wind damage & brown bast, high timber volume etc. are considered important. Research work is also conducted towards early identification of clonal characters using RADP techniques.

2. Plant Science Department

The broad objectives of this department are to identify and recommend cost effective techniques from plant production up to latex harvesting which would maximize the productivity. The quality of planting material is improved constantly. Planting techniques to improve the performance of the clearings and also methods of exploitation to cut down on cost of production (COP) are researched. Cultural practices during the immature phase along with intercropping are also looked at and recommendations are made where necessary. Plant physiological research is conducted to help increase the

productivity and tissue culture work is also continued with some progress. Apart from research and advisory work, this Department is also involved in activities to ensure high quality plant production for the sector through regular monitoring of all rubber nurseries.

3. Soils & Plant Nutrition Department

The main trust areas are research on improvement of soil fertility, increasing fertilizer use efficiency, soil& water conservation and weed control. This department also provides services such as site-specific fertilizer recommendation for mature rubber, land selection for planting rubber and chemical analysis of soil, plant and fertilizer samples.

4. Plant Pathology & Microbiology Department

Centre for planning, implementation and management of research on (a) all aspects of the maladies of the rubber plantations and (b) improvement of beneficial soil micro flora. Main research projects include screening of clones for disease resistance, testing pesticides, development of integrated pest management systems, biology and epidemiology of pests and surveillance of potential pathogens & disease out breaks.

5. Biochemistry & Plant Physiology Department

This department aims to meet the needs of stake-holders in the rubber industry particularly in the biochemical and physiological aspects. Ultimate focus is to build up a cleaner environment meeting the productivity goals in the present day context. Among the research programs, testing low intensity tapping systems with different methods of stimulation and developing convenient and reliable means of assessing rubber content in latex are in priority.

6. Advisory Services Department

The main objective is the technology transfer to the rubber smallholders in order to improve the adoption rate of recommended technologies to enhance productivity and profitability of the rubber growers.

7. Biometry Section

Providing statistical consultancy to other research departments of RRI, stakeholders and students, maintenance of databases on meteorological factors in the rubber growing areas, while providing data of the agro-meteorological station at Dartonfield to the national system are among the key services of the Biometry section. Development, modification and application of statistical techniques to suit the rubber sector and studies on environmental change are the main research focuses.

8. Adaptive Research Unit

This unit uses both "Top-down" and "Bottom-up" approaches to refine the technologies available in the large scale plantation sector in favour of smallholders and plan the future research to cater the smallholder requirements, accordingly. Also this unit facilitates rubber cultivation in non-traditional areas. Among the research activities of the unit, developing protocols for rubber cultivation in nontraditional areas, assessing livelihood and environmental impacts of rubber cultivation and evaluating rubber based farming systems and other agronomic practices whilst characterizing the socio economic conditions of smallholdings are in top priority.

9. Agriculture Economics Unit

This unit is mainly involved in two major research areas namely, a) Socio-economic studies in the rubber sector in relation to cultivation, processing and marketing and b) Impact evaluation of different policies implemented in the rubber sector.

Technology

The Technology Departments of the Institute carryout research and development work on raw rubber processing and rubber products, with the aim of developing new high value end products and also improving the quality of the products already being manufactured in the country to meet international standards. The departments concerned are situated at Telawala Road, Ratmalana and their functions are as follows.

1. Raw Rubber Process Development and Chemical Engineering

The main function of the department is to carry out research and development on raw rubber processing for the betterment and sustainability of the industry while protecting the environment. The department provides advice on trouble shooting, process development and quality improvement in the raw rubber processing industry. The department is also responsible for assisting the raw rubber industry in human resource development and human safety. Providing technical know–how and all other assistance in the management of waste water generated in raw rubber processing and rubber product manufacturing industries are also major functions of the department.

2. Polymer Chemistry

Major objectives of the department is to carry out Research and Development work on Polymers to optimize the quality and productivity of polymer manufacturing and processing industry. Modification of natural rubber, dry and latex form for improved quality, development of polymers including latex forms to suit the end user applications and identification and selection of additives to optimize process ability of polymer compounds are major Research and Development areas of the department.

3. Rubber Technology and Development Department

Major objective of the department is to carry out Research and Development work on all aspects of Rubber Technology in order to upgrade the rubber based product industries in Sri Lanka to acquire the global standards and thereby making Sri Lankan rubber products competitive in the international markets**.** Rubber compound development, both latex and dry rubber, physical testing of rubber products and compounds, assisting the small and medium scale prospective rubber product entrepreneurs in product development are among the major functions of the department.

4. Raw Rubber and Chemical Analysis Department

The main function of the department is to provide testing and analytical facilities for all forms of dry rubber and rubber latex and issuing of test certificates recognized by all parties concerned in the rubber trade. Research and development work related to chemical analysis and development of test methods related to testing of rubber and latex of all forms is the other major activity of the department.

Service Units

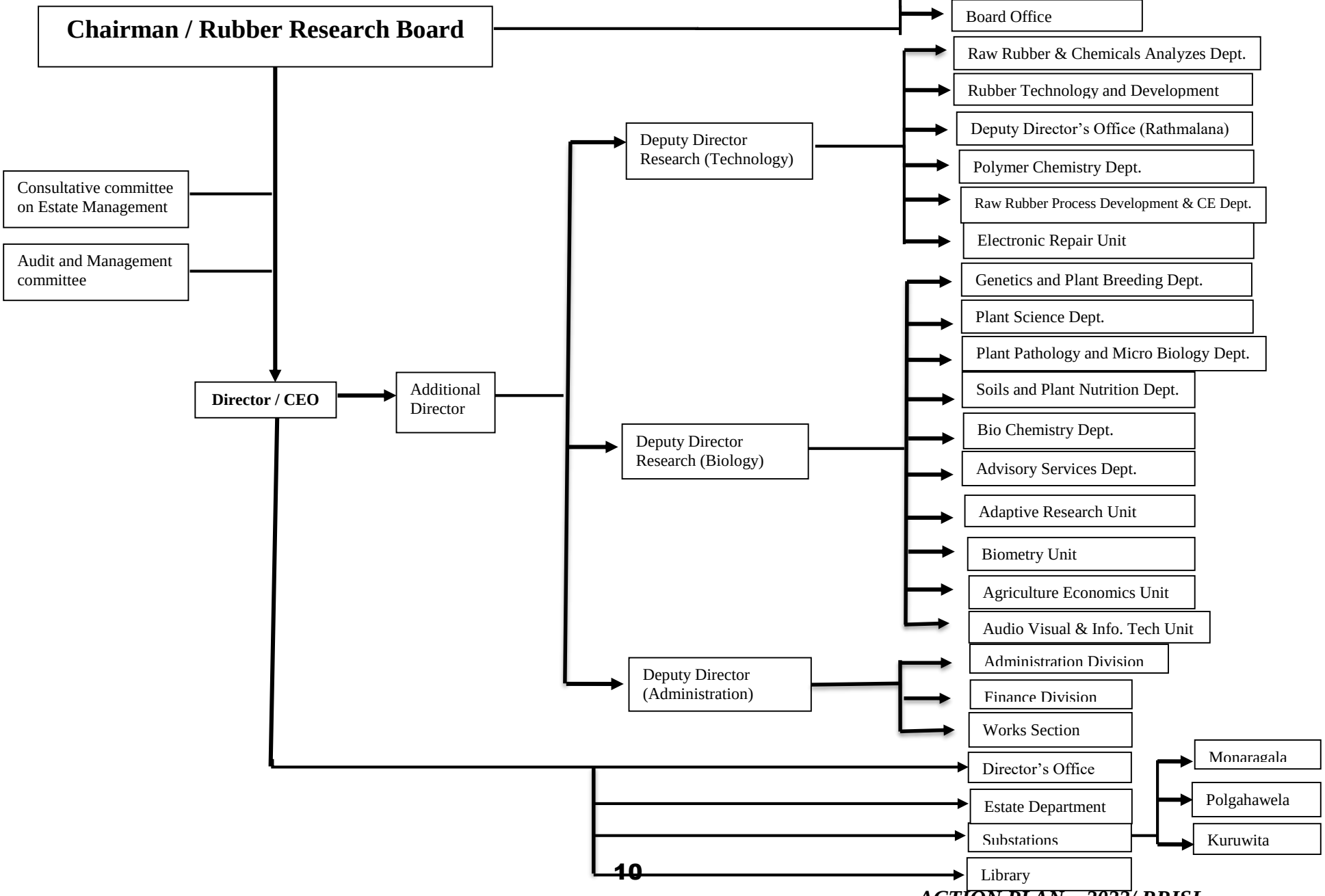
1. Audio Visual & Information Technology Unit

Provides audio visual aids including scientific photography for the research and extension activities. Administration and maintenance of the computer network of the institute including Ratmalana Offices, Technology departments and substations. Updating of the RRI website and supervising maintenance of the institutes' international telephone network and attendance recording machines. This unit also supports the functions of institute accounting software package.

2. Electronic Instruments Repair Unit

Undertakes the repairs of the electronic scientific instruments of the institute. However, currently this units has no staff.

DIAGRAM 01 -ORGANIZATION STRUCTURE



CURRENT RESOURCES AVAILABLE

Infrastructure

The Rubber Research Institute of Sri Lanka (RRISL) has about 2970m^2 of laboratory and office space at its Head Quarters in Agalawatta. Biological research departments and units are located in Agalawatta. In addition, Plant Breeding Department and the Training Center are located in Nivithigalakale substation, Mathugama. Technology Research Departments, Advisory Services Department and the Board Office situated at Ratmalana. Further, about 5313m^2 building space is available at substations located in Monaragala, Kuruwita and Polgahawela.

RRISL also owns approximately 492ha of lands at the Head Office Agalawatta, and its substations Nivithigalakale, Kuruwita, Polgahawela & Monaragala. In particular, Monaragala Substation is devoted to support the expansion process of the rubber cultivation in Monaragala District and in the Eastern Province.

Human Resources

Human resources are considered as the most important asset of any research organization and its qualification based profile is presented tables 1-4. Details of cadre positions are given in table 05. Around 32 scientists are engaged on research activities. Advisory Services Department has 05 Regional Extension offices and currently has only one Regional Officer. Total number of supporting staff for research is (Table 01).

HUMAN RESOURCE PROFILE BY DISCIPLINE ACROSS DIVISIONS
(As at31st December2021with only the highest level of qualifications)

01. Research& Extension Staff (only executive grades)

Discipline	Ph.D.	M.Phil.	M.Sc.	B.Sc.	Without Degree/Diploma	Total
Management	02	00	00	00	00	**02**
Genetics & Plant Breeding	02	00	00	01	00	**03**
Plant Science	01	01	00	01	00	**03**
Plant Pathology & Microbiology	02	00	00	00	00	**02**
Soils & Plant Nutrition	01	01	00	01	00	**03**
Biochemistry & Physiology	01	00	00	01	00	**02**
Polymer Chemistry	01	00	01	01	00	**03**

Raw Rubber and Chemical Analysis	01	01	00	00	00	**02**
Rubber Technology & Development	01	01	00	01	00	**03**
Raw Rubber Process Development & Chemical Engineering	00	00	00	00	00	**00**
Advisory Service	00	00	0	01	00	**01**
Biometry	01	00	00	01	00	**02**
Adaptive Research	01	00	00	01	00	**02**
Agricultural Economics	00	00	01	01	00	**02**
Estate	00	00	00	01	00	**01**
Grand Total	**14**	**04**	**03**	**11**	**00**	**31**

02. Research& Extension Support Staff (including staff grades)

Discipline	M.Phil.	M.Sc.	B.Sc.	Diploma	Without Diploma/ Degree	Total
Genetics & Plant Breeding	01	00	02	01	02	**06**
Plant Science	00	01	07	01	01	**10**
Plant Pathology & Microbiology	00	00	04	02	00	**06**
Soils & Plant Nutrition	00	00	06	03	01	**10**
Biochemistry & Physiology	00	00	03	01	00	**04**
Advisory Service	00	00	09	05	01	**15**
Polymer Chemistry	00	00	04	01	00	**05**
Raw Rubber and Chemical Analysis	00	00	04	01	01	**06**
Rubber Technology & Development	00	01	04	02	00	**07**
Raw Rubber Process Dev. & Chemical Engineering	00	01	03	00	02	**06**
Biometry	00	00	00	01	00	**01**
Adaptive Research	00	00	00	02	00	**02**
Grand Total	**01**	**03**	**46**	**20**	**08**	**78**

03. Administrative Staff – Executives(non research)

Discipline	Degree	ICASL/CIMA/ ACCA/APFA	IRCA	Diploma	Without Dip./ Degree	Total
Administration	01	00	00	00	00	**01**
Accounts	01	01	00	00	00	**02**
Internal Audit	00	00	01	00	00	**01**
Audio Visual Aids Production	01	00	00	00	00	**01**
Works Section	01	00	00	00	00	**02**
Estate	01	00	00	00	00	**01**
Grand Total	**05**	**01**	**01**	**00**	**00**	**07**

04. Administrative Staff – Non Executives (including staff grades)

Discipline	Degree	RMP	Diploma	Without Diploma/ Degree	Total
Scientific Departments	01	00	00	11	**12**
Advisory Service Department	01	00	00	02	**03**
Administration Department	02	01	00	11	**14**
Accounts Section	02	00	00	12	**14**
Internal Audit Unit	00	00	00	01	**01**
Library & Publication	01	00	00	03	**04**
Board Office	00	00	00	01	**01**
Works Section	01	00	03	03	**07**
Estate Department	00	00	00	04	**04**
Instrument Repair Unit	00	00	00	00	**00**
Kuruwita Substation	00	00	01	01	**02**
Polgahawela Substation	00	00	00	01	**01**
Monaragala Substation	00	00	00	04	**04**
Grand Total	**08**	**01**	**04**	**54**	**67**

Annex 1

Cadre Information as at 31.12.2021

Serial No.	Designation	Service	Grade	Salary Code	Salary Scale	Service Level	Approved Cadre			Actual Cadre			Other (Acting/…)
							Permanent	Contract	Casual	Permanent	Contract	Casual	
1	Chairman					Senior Level							
2	Director		HM 2-3	HM 2-3	98215-12x2700-130615	Senior Level	1			0			
3	Additional Director		HM 2-1	HM 2-1	93020-12x2700-125420	Senior Level	1			1			
4	Deputy Director Research		HM 1-3	HM 1-3	86865-15x2270-120915	Senior Level	2			1			
5	Heads of Research Departments		HM 1-3	HM 1-3	86865-15x2270-120915	Senior Level	10			5			
6	Principal Research Officer		HM 1-3	HM 1-3	86865-15x2270-120915	Senior Level	14			3			
7	Principal Advisory Officer		HM 1-3	HM 1-3	86865-15x2270-120915	Senior Level	1			0			
8	Deputy Director (Administration)		HM 1-2	HM 1-2	81670 -15x2270 -115720	Senior Level	1			0			
9	Senior Accountant		HM 1-2	HM 1-2	81670 -15x2270 -115720	Senior Level	1			1			
10	Senior Manager - Estate		HM 1-1	HM 1-1	80295-15X2270-114345	Senior Level	1			1			
11	Senior Research Officer		AR 2	AR 2	76200-10X2000-96200	Senior Level	19			6			
12	Senior Advisory Officer		AR 2	AR 2	76200-10X2000-96200	Senior Level	2			0			
13	Accountant		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			1			
14	Manager - Estate		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			0			

15	Resident Engineer		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			1			
16	Senior Administrative Officer		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			1			
17	Network Administrator		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			1			
18	Internal Auditor		1/II	MM 1-2	54550-10x1375-15x1910-96950	Senior Level	1			1			
19	Research Officer		1/II	AR 1	53150-10X1375-15X1910-95550	Senior Level	26			13			
20	Advisory Officer		1/II	AR 1	53150-10X1375-15X1910-95550	Senior Level	3			1			
21	Registered Medical Practitioner		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			1			
22	Administrative Officer		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	2			1			
23	Assistant Training Officer		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			1			
24	Engineering Assistant		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			1			
25	Librarian & Publication Officer		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			1			
26	Personal Asst. to Chairman		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
27	Personal Asst. to Director		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
28	Accounting & Procurement Officer		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
29	HR Development Officer*		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
30	PRO/Welfare Officer		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
31	Development Officer*		1/II	JM 1-2	43355-10x755-18x1135-71335	Tertiary Level	1			0			
32	Rubber Extension Officer		1/II/III	MA-4	37970-10x755-15x930-5x1135-65145	Tertiary Level	22			15			

33	Audio Visual Aids Producer Officer		1/II/III	MA-4	37970-10x755-15x930-5x1135-65145	Tertiary Level	1			0			
34	Experimental Officer		1/II/III	MA-4	37970-10x755-15x930-5x1135-65145	Tertiary Level	30			23			
35	Translator		1/II/III	MA-4	37970-10x755-15x930-5x1135-65145	Tertiary Level	1			0			
36	Technological Officer (Civil)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			1			
37	Technological Officer (Mechanical)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			1			
38	Technological Officer (Electrical)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
39	Library Asst. & Publication Asst.		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	2			2			
40	Transport Officer		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			1			
41	Management Assistant (Book-keeping)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
42	Management Assistant (Store-keeping)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	2			0			
43	Pharmacist		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
44	Factory Officer		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			

45	Technical Officer (Computer Hardware)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
46	Technical Officer (Audio Visual)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
47	Technical Officer (R & D)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	51			40			
48	Technical Officer (Instrument)		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	2			0			
49	Field Officer		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	12			4			
50	Store Keeper*		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
51	Work Supervisors*		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	6			0			
52	Assistant Factory Officer*		1/II/III	MA 2-2	30310-10X300-7X350-4X600-20X710-52360	Secondary Level	1			0			
53	Management Assistant		1/II/III	MA 1-2	27910-10x300-7x350-12x600-12x710-49080	Secondary Level	69			53			
54	Telephone Operator		1/II/III	MA 1-2	27910-10x300-7x350-12x600-12x710-49080	Secondary Level	2			2			
55	Administrative Assistant *		1/II/III	MA 1-2	27910-10x300-7x350-12x600-12x710-49080	Secondary Level	1			0			
56	Driver		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	30			21			

57	Electrician/Linesman		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	4			4			
58	Carpenter		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	4			3			
59	Mason		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	4			2			
60	Plumber		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	2			3			
61	Artist		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			0			
62	Polisher/Painter		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			0			
63	Mechanic		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			0			
64	Motor Mechanic		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	2			1			
65	General Mechanic		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			1			
66	Ref./Air-conditioning/Electrician		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			1			
67	Tinker/Painter		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			1			
68	Tinker/Welder		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			1			
69	Blacksmith		1/II/III	PL-3	26290-10x270-10x300-10x330-12x350-39490	Primary Level	1			1			
70	Laboratory Attendant		1/II/III	PL 2	25750-10x270-10x300-10x330-12x350-38950	Primary Level	46			37			
71	Guest House Keeper		1/II/III	PL-2	25750-10x270-10x300-10x330-12x350-38950	Primary Level	2			0			
72	Engine Driver		1/II/III	PL -2	25750-10x270-10x300-10x330-12x350-38950	Primary Level	1			1			
73	Junior Assistant Field Officer *		1/II/III	PL 2	25750-10x270-10x300-10x330-12x350-38950	Primary Level	0			2			

74	Office/Crech/Club/Library/Stores Attendants		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	26			26			
75	Vehicle Attendant		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	3			3			
76	Watcher		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	10			10			
77	Labourer		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
78	Dispensary Attendant		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	2			2			
79	General Worker (Generator Oper.)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
80	Gardner		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	2			2			
81	General Worker (Gene./Water Pump)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	3			3			
82	General Worker (Masonary)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
83	General Worker (Motor Vehicles)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
84	General Worker (Painting/Polishing)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
85	General Worker (Plumbing)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
86	General Worker (Water Pump Oper.)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	3			3			
87	Sanitary Attendant		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	2			2			
88	General Worker (Carpentary)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
89	General Worker (Electrical)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			
90	General Worker (Cooking)		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			1			

91	Engine Driver *		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	1			0			
92	General Worker		1/II/III	PL 1	24750-10x250-10x270-7x300-15x330-37000	Primary Level	0			26			
	Total						**476**			**349**			

*** No Scream of Recruitment for these posts**

RECRUITMENT SCHEDULE FOR SOME OF THE VACANCIES TO BE FILLED DURING THE YEAR 2022

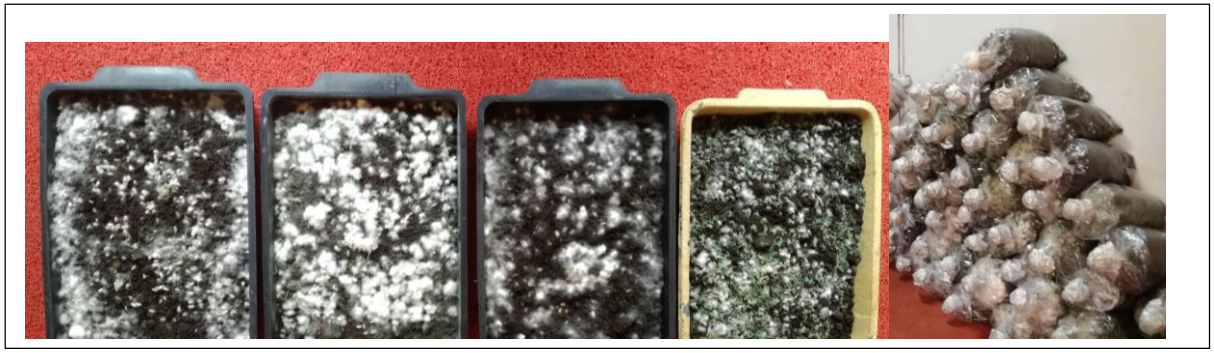
No.	Designation	No. of Vacancies available	No. of Vacancies Scheduled to be filled	Time of recruitment Scheduled
01	Director	01	01	
02	Principal Research Officer	10	01	
03	Senior Research Officers	16	16	
04	Senior Advisory Officers	02	02	
05	Manager - Estate	01	01	
06	Research Officers	12	10	
07	Accounting & Procurement Officer	01	01	
08	P.A. to Director	01	01	
09	Translator	01	01	
10	Pharmacist	01	01	
11	Book - keeper	01	01	
12	Rubber Extension Officers	04	04	
13	Audio Visual Aids Production Officer	01	01	
14	Technical Officer (R & D)	06	06	
15	Technical Officer (Audio Visual)	01	01	
16	Technical Officer (Computer Hardware)	01	01	
17	Technical Officer (Instrumental)	02	02	
18	Technological Officer (Electrical)	01	01	
19	Factory Officer	01	01	
20	Field Officers	06	07	
21	Management Asst. (S.K.)	02	02	
22	Drivers	06	06	
23	Polisher/Painter	01	01	
24	Mechanic	01	01	
25	Motor Mechanic	01	01	
26	Mason	01	01	
27	Carpenter	01	01	
28	Lab. Attendant	08	06	
29	Guest House Keeper	02	02	
	Total	**104**	**83**	

ACHIEVEMENTS DURING LAST FIVE YEARS

Rubber Research Institute of Sri Lanka has a proud record in all fields of rubber research with international recognition. Some achievements made during the last five years for the development of the rubber industry of the country are given below.

2021

- Registration of two native biopesticides isolated from rubber growing soils against the white root disease



- Rubber compounds suitable to produce brake pads, brake washers and cable guides used in vehicles as well as a rubber component for a biomedical item produced in Sri Lanka were developed at the request of medium scale rubber product manufacturing companies.

Auto mobile components

- Sixty-four on farm participatory research trials were completed for compost application covering 131.8 total acres.
  Districts – Kalutara, Kurunegala, Kandy/Matale, Kegalle, Matara, Galle, Colombo, Ratnapura

  Mature lands – 27 (Acres – 68)
  Immature lands – 37 (Acres 63.8)


Demonstration plots for organic manure application - Kalutara Range


Demonstration plots for organic manure application – Ittapana Range


Demonstration plots for organic manure application – Mathugama

- Introduction and Establishment of pasture in selected land of rubber smallholders in Kalutara district.
  Objective of this study was to improve the livelihood of rubber smallholder sector by introducing an extra income.

  Fourteen farmers were participated for the project covering 12 acres.




Harvesting of pasture in Kalutara district

- Promotion of cinnamon as a boundary crop for the rubber plantations. There have been no marked variations of growth and yield of rubber adjacent to the fence crops.

- Graphene oxide was synthesized successfully using graphite as intermediate material in the synthesis of nanographene, which will be used in manufacture of electronic components.

Graphite

Graphene oxide

- Development of two rubber intercropping models with Guava and Soursop

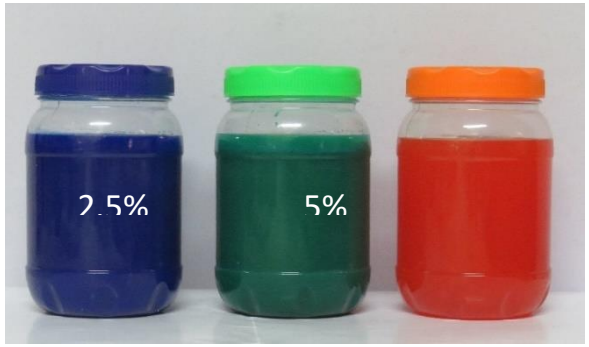
- Establishment of environmental friendly, economically viable slow release fertilizer technique to improve crop performance of *Hevea* at 14 estates under Pussellawa, Agalawatta, Kelani Velly and Kegalle Plantations and six small holder sites.

Preparation of Porous tubes for field application

Field establishment of Reusable Fertilizer Porous Tube

2020

- Two new commercial ethephon formulations i.e. water based and oil based were developed locally.



- Use of the **Reusable Slow Release Fertilizer Porous Tube** (RSPT) has resulted in significantly higher in plant girth (20%), soil exchangeable Mg, leaf nitrogen and magnesium over the conventional fertilizer application.

- Shoes were produced for the export market in collaboration with a medium scale manufacturer by partial replacement of virgin rubber in out-sole compounds with patented novel reclaimed rubber developed using an environmental friendly reclaiming agent with the aim of reducing the cost of shoes.

- NR based composites with synthesized micro and nano fibres of coir were developed with the aim of replacing carcinogenic carbon black and enhancement of properties.

- Initial development of NR latex based fashionable gloves to protect against the Covid-19 pandemic.

- NR latex compound as a water-proof coating material for tents made out of fabric was developed on a request made by a client as a need during Covid-19 pandemic.

- NR based composites with durian husk fibres as a partial replacement for carbon black which has been identified as a carcinogenic ingredient, were developed and shoe soles were produced in collaboration with the Textile Department, Open University of Sri Lanka.

- Natural rubber latex foam was produced successfully using creamed latex for the benefit of Small and Medium Enterprises.

- Natural rubber latex based nontoxic adhesive was developed using a plant based preservative and tackifying agent at the request of a toy company and the formulation was transferred to the company.

- Natural rubber based formulation suitable to produce protective caps for bicycles were developed.

- A non – toxic, transparent natural rubber based compound for teats and teething rings was developed for a toy company.
- Natural rubber/Ethylene – Propylene – Diene Monomer blend compound suitable for an automobile application was developed.
- Novel nitrosamine free preservative system was developed for natural rubber latex.

- Coir pith and elephant dung were found to be better sowing media than river sand for germination of rubber seeds.

- Polybags of reduced sizes (from 15" x 6" to 15" x 4") were found effective for raising budded rubber plants.

- Antioxidant treatments were found to be effective in arresting tapping panel dryness of rubber trees.
- A new microbial based medium was introduced for rapid skeletanization of rubber leaves.
- Application frequency of mammalian pest repellant was identified as six months for the Intermediate zone.
- Once in four days harvesting system was introduced successfully, to rubber smallholder sector.
- Raw Rubber and Chemical Analysis Department was renovated according to international quality standards in view of achieving ISO 17025 Laboratory Accreditation, which is an urgent requirement for the rubber industry in Sri Lanka.
- Mobile apps for technological solutions in the rubber industry was introduced.

2018

- Single application of newly developed fertilizer encapsulated coir bricks (ECB) was found to be sufficient achieving required growth rate in immature rubber plants under field conditions.

- Reusable porous fertilizer tube was developed for immature rubber plants, with maximize fertilizer use efficiency and minimize wastage.
- "Saka Sara" liquid organic fertilizer was developed by using freely available organic materials, green manure, farm yard manure, crop residues, locally available Eppawala Rock Phosphate (ERP) and Dolomite.

- Two soil maps relevant to rubber growing areas in Kalutara and Ratnapura districts were developed and ten different soil series were identified.

- Use of polythene and shade net as alternative weed management practices showed no weed regeneration around the base of immature plants up to 18 months.

- A protocol for local production of ethephon stimulant was developed.

- Natural rubber composites were developed with surface treated fibres of the pineapple crown as well as Arricanut husk with the aim of developing green rubber composites. NR based composites were prepared using plant based non-modified and modified Moringaoleifera crude.

- Presidential merit award in the "Chemistry" category was received for the patented mechano-chemical reclaiming process (Oreclaim) for ground rubber tyre developed using a natural product.

- A mechano-chemical reclaiming process was developed for NR based carpet waste on the request of a large scale rubber product manufacturer and the technology was transferred to the company.

- A non-conductive NBR based compound was developed for grommet used in assembling of electric cables, SBR based compound for condenser end mount and wiring bunch bush and EPDM based compound for suction end mount on requests made by a private company engaged in assembling electrical components. Technology were transferred to the comp

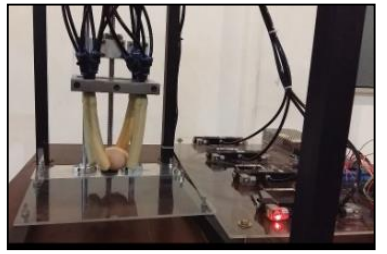
2017

- Fertilizer encapsulated coir bricks was developed for maximize fertilizer use efficiency, with minimum wastage in rubber plantations.

- Prepared three soil maps relevant to rubber growing areas in Matara**,** Galle and Kegalle districts and identified fifteen different soil series.
- A non – toxic NR latex based adhesive for paper was developed and commercialized.

- A non – toxic NR latex based paint was developed for rubber toys.
- A synthetic rubber based compound for the sliding shoe of crawlers was developed at the request of the Road Development Authority.
- Natural Rubber latex foam suitable to manufacture ear plugs was produced at the request of an industrialist.
- Natural Rubber latex compounds suitable to parts for robot arms were developed for the research activities of University of Moratuwa.

- An epidemic of Cockchafer grub infestation was reported during the year from Elpitiya, Horana, Padukka and Avissawella areas and insecticide, imidocloprid was identified as a substitute for chlorphyrofos.
- New antagonistic fungi to use as biological control agents (specie to be identified) against white root disease fungus were identified from rubber growing soils.
- A novel method was developed to synthesize *in situ* filler incorporated natural rubber latex.
- New hybrid solar – biomass dryers for rubber sheet manufacturing was designed.



- New chemicals were recommended for the control of white root disease.
- Model rubber holdings, villages and processing centers were established.
- A new test method was developed to estimate dry rubber content of latex at the field as a replacement for metrolac.
- A natural rubber latex based adhesive with good storage stability was developed for shoes

BUDGET ESTIMATES- 2022

Head No. 410-02-03-1-1503 / 1509

Recurrent Expenditure - 2022

Object Code	Category/Object Title	Sche. No.	Budget 2021 Rs. 000's	Exp up to Now 2021 - Rs. 000's	Budget 2022 Rs.000's
	Personal Emoluments		**350,000**	**305,235**	**350,000**
1001	Salaries & wages	**1**	215,787	190,176	204,764
1002	Overtime & Holiday Payments		10,000	8,263	15,500
1003	Other Allowances	**2**	124,213	106,796	129,737
	Travelling Expenses		**13,000**	**5,419**	**8,250**
1101	Domestic		12,500	5,419	8,000
1102	Foreign		500		250
	Supplies		**12,850**	**10,078**	**8,350**
1201	Stationary & Office Requisites		2,750	2,871	2,000
1202	Fuel		6,500	5,965	3,000
1205	Other	**3**	3,600	1,242	3,350
	Maintenance Expenditure.		**20,500**	**14,352**	**7,100**
1301	Vehicles		5,000	3,639	3,500
1302	Plant, Machinery & Equipment		2,500	2,826	1,000

RUBBER RESEARCH INSTITUTE OF SRI LANKA

BUDGET ESTIMATES- 2022

Head No. 410-02-03-1-1503 / 1509

Recurrent Expenditure - 2022

Object Code	Category/Object Title	Sche. No.	Budget 2021 Rs. 000's	Exp up to Now 2021 - Rs. 000's	Budget 2022 Rs.000's
1303	Building & Structures - Repairs & Maintenance		8,000	5,000	2,600
	Maintenance Roads		5,000	2,887	
	Services		**55,650**	**36,222**	**51,300**
1401	Transport/Hiring Vehicles		500	188	500
1402	Postal and Communication		3,000	2,189	3,000
1403	Electricity and Water		8,000	5,561	8,000
1404	Rents and Local Taxes		1,000	185	600
1405	Other	**4**	43,150	28,099	39,200
	Total Recurrent Expenditure		**452,000**	**371,307**	**425,000**

BUDGET ESTIMATE

Recurrent Expenditure (Detailed) – 2022

Object Code	Category/Object Title	Sche. No.	Budget 2021 Rs. 000's	Exp up to Now 2021 Rs. 000's	Budget 2022 Rs.000's
1001	**Salaries & Wages**	**1**	**215,787**	**190,176**	**204,764**
	Salaries & Wages		177,654	157,743	168,423
	EPF Contribution		31,750	27,027	30,255
	ETF Contribution		6,383	5,405	6,086
1002	**Overtime & Holiday Payments**		**10,000**	**8,263**	**15,500**
	Overtime & Holiday Payments		10,000	8,263	15,500
1003	**Other Allowances**	**2**	**124,213**	**106,796**	**129,737**
	Cost of Living		34,913	30,375	33,907
	Rent and other Allowance		1,236	976	1,359
	Gratuity Payments		14,085	13,062	4,500
	Medical Benefits		45,000	37,724	46,366
	Research Allowances		10,000	8,101	24,839
	Professional allowance		3,252	3,076	3,090
	Transport & Fuel Allowances		10,263	9,262	9,993
	Telephone Allowance		5,464	4,219	5,683

BUDGET ESTIMATE

Recurrent Expenditure (Detailed) – 2022

Object Code	Category/Object Title	Sche. No.	Budget 2021 Rs. 000's	Exp up to Now 2021 Rs. 000's	Budget 2022 Rs.000's
1205	**Other Supplies**	**3**	**3,600**	**1,242**	**3,350**
	Medical Expenditures		1,100	204	1,100
	Other Consumables		1,500	680	1,500
	L.P. Gas Expenditures		1,000	358	750
1405	**Other Services**	**4**	**43,150**	**28,099**	**39,200**
	Printing Charges/ Publications		1,000	739	1,000
	Insurance Expenditures		2,500	1,393	2,500
	Polgahawela Sub Station Maintenance		1,000	360	500
	Monaragala Sub Station Maintenance		1,000	583	500
	Field Expenditures		1,500	467	1,000
	IRRDB Contribution		2,750	-	2,700
	Administrative & General Charges		5,500	4,881	6,000
	Welfare Expenditures		1,500	291	1,000
	Contractual services for Research Support		26,400	19,386	24,000
	Revenue	**5**	**21,000**	**9,909**	**25,000**
	Other Income		12,000	9,909	20,000
	Revenue - DF Estate		9,000		5,000

RUBBER RESEARCH INSTITUTE OF SRI LANKA

BUDGET ESTIMATE

Capital Expenditure – 2022

Object Code	Category/Object Title	Sch:No.	2021 -Rs. 000's	Exp up to Now 2021 - Rs. 000's	Budget 2022 Rs. 000's	Additional Requirement Rs. 000's	Total Rs. 000's
	CAPITAL EXPENDITURE						
	Rehabilitation and Improvement of Capital Assets		**30,580**	**12,903**	**1,500**	**54,200**	**55,700**
2001	Buildings - Rehabilitation		25,780	5,578		32,000	32,000
2002	Plant, Machinery and Equipment		3,650	5,985		12,200	12,200
2005	Maintenance of Buildings		1,150	1,340	1,500	10,000	11,500
	Acquisition of Capital Assets		**35,270**	**7,633**	**2,500**	**37,290**	**39,790**
2102	Furniture and Office Equipment		10,870	5,156		8,590	8,590
2106	Other- Laboratory Equipment's		24,000	2,478	2,500	28,200	30,700
	Library Books		400			500	500
	Development Capital		**11,500**	**6,144**	**7,500**		
2105	Lands and Land Improvements- Research & Dev.		500		500		
	Monaragala Substation Nursery		4,500	4,448	4,800		
	Establishment of Adaptive Research Trials (Polgahawela)		500	17	200		
	Establishment of Research Trials (North East)		500	302	500		
	Split Based PhD programme		2,500	379			
	Human Capital Development Programme		3,000	998	1,500		

BUDGET ESTIMATE
Capital Expenditure – 2022

Object Code	Category/Object Title	Sch:No.	2021 -Rs. 000's	Exp up to Now 2021 - Rs. 000's	Budget 2022 Rs. 000's	Additional Requirement Rs. 000's	Total Rs. 000's
	Research Projects		**20,000**	**9,902**	**18,500**	**3,500**	**22,000**
	Research and Development		20,000	9,902	18,500	3,500	22,000
	Special Capital Project		**37,650**	**20,920**	**-**	**30,210**	**30,210**
01	Project 1 (Carbon)		4,300	2,111		5,000	5,000
02	Project 2 (LIH)		18,500	8,342		18,520	18,520
03	Project 3 (Intercropping)		5,100	3,564			-
04	Project 4 (White root)		9,750	6,903		6,690	6,690
	Total Capital Expenditure		**135,000**	**57,503**	**30,000**	**126,700**	**156,700**
	Special Capital Projects SMTR						
Estate	Developing a Model Estate at DF - CF		16,000	14,500		-	-
Soil	Modification of Fertilizer Recommendation		1,000	524	-	-	-
G&PB	Screening of drought/stress tolerant Hevea Clones for sustainable rubber cultivation in marginal areas		20,500	5,800	4,740	2,160	6,900
RR&CA	Establishment of accredited laboratory and enhancement of testing facilities for rubber industry in Sri Lanka		22,000	19,500	19,230	8,770	28,000
Soil	Establishment of environmental friendly, economically viable slow release fertilizer technique		25,000	9,170	15,380	7,020	22,400
DDRT	Monitoring and optimizing the performance of rubber effluent treatment plants		28,000	12,388	11,280	5,150	16,430

BUDGET ESTIMATE
Capital Expenditure – 2022

Object Code	Category/Object Title	Sch:No.	2021 -Rs. 000's	Exp up to Now 2021 - Rs. 000's	Budget 2022 Rs. 000's	Additional Requirement Rs. 000's	Total Rs. 000's
PP&MB	Studies on the biology and epidemiology of the Pestalotiopsis Leaf fall disease and to develop effective management strategies		10,000	7,680	9,370	4,270	13,640
	Total Capital Expenditure		**122,500**	**69,562**	**60,000**	**27,370**	**87,370**
SUMMARY OF GOVERNMENT CONTRIBUTION							
	Expenditure		**Rs 000's**	**Rs 000's**	**Rs 000's**	**Rs 000's**	**Rs 000's**
	Personal Emoluments		350,000	280,012	350,000		350,000
	Recurrent Expenditure		102,000	58,529	75,000		75,000
	Capital Expenditure - CF		135,000	57,503	30,000	126,700	156,700
	Capital Expenditure - SMTR		122,500	69,562	60,000	27,370	87,370
	Total		**709,500**	**465,605**	**515,000**	**154,070**	**669,070**
	Financed by						
	Own Revenue - from RRI		12,000	70,613	20,000		20,000
	Own Revenue - from DF				5,000		5,000
	Treasury Grant – Personal Emoluments (!503)		350,000	290,000	350,000		350,000
	Treasury Grant – Other Recurrent (1509)		90,000	47,490	50,000		50,000
	Capital Grant - (From Treasury)(2201)		135,000	57,503	30,000	126,700	156,700
	Capital Grant - (From Treasury/ SMTR)		122,500	69,562	60,000	27,370	87,370
	Total		**709,500**	**535,168**	**515,000**	**154,070**	**669,070**

BUDGET ESTIMATE
Capital Expenditure – 2022

Object Code	Category/Object Title	Sch:No.	Total Rs. 000's
	Expenditure		**Rs 000's**
	Personal Emoluments		350,000
	Recurrent Expenditure		75,000
	Capital Expenditure - CF		30,000
	Capital Expenditure - SMTR		60,000
	Total		**515,000**
	Financed by		
	Own Revenue - from RRI		20,000
	Own Revenue - from DF		5,000
	Treasury Grant – Personal Emoluments (!503)		350,000
	Treasury Grant – Other Recurrent (1509)		50,000
	Capital Grant - (From Treasury)(2201)		30,000
	Capital Grant - (From Treasury/ SMTR)		60,000
	Total		**515,000**

Budget Estimate – 2022
New Special Capital Projects

Rs."000

	New Special Capital Projects	Dept.	2018	2019	2020	2021	2022 Estimate (funds to be provided)
01	Approaching the voluntary carbon market with the rubber cultivation in Eastern and Uva Provinces for greener economy	ARU	5,000	4,608	4,830	4,300	5.000
02	Effective introduction of newly developed Low Intensity Harvesting (LIH) systems to address the current issues in rubber plantation industry	BC	20,000	17,003	22,230	18,500	18,520
03	Improvement of strategies to combat White Root Disease in rubber plantations	PP & MB	10,000	8,985	8,674	9,750	6,690
04	Intercropping diverse crop plants (medicinal, fruit crops and multipurpose crops) under rubber in nontraditional areas to ensure economically and environmentally sustainable land use practice for rubber cultivation	PS	10,000	9,216	8,719	5,100	-
	Total Contribution		**45,000**	**39,813**	**44,453**	**37,650**	**30,210**

CASH FORECAST FOR SPECIAL CAPITAL DEVELOPMENT PROJECTS

Annex 4

Project Name: **Establishment of environmental friendly, economically viable slow release fertilizer technique to improve crop performance and establishment of accredited laboratory to supply good service to the rubber industry**

CF MPI

Month (2022)		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sep.	Oct.	Nov.	Dec.	Total
Financial Requirement (Rs.Mn)	Recurrent													
	Capital	0.63	0.63	0.64	1.15	1.15	1.15	1.66	1.67	1.67	1.67	1.68	1.68	**15.38**

Project Name: **Establishment of accredited laboratory and enhancement of testing facilities for rubber industry in Sri Lanka**

CF MPI

Month (2022)		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sep.	Oct.	Nov.	Dec.	Total
Financial Requirement (Rs.Mn)	Recurrent													
	Capital	0.05	0.06	0.06	0.24	0.24	0.25	5.74	5.74	5.75	0.36	0.37	0.37	**19.23**

Project Name: **Screening of drought /stress tolerant Hevea clones for sustainable Rubber cultivation in marginal areas**

CF MPI

Month (2022)		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sep.	Oct.	Nov.	Dec.	Total
Financial Requirement (Rs.Mn)	Recurrent													
	Capital	0.19	0.20	0.20	0.54	0.55	0.55	0.34	0.34	0.35	0.49	0.49	0.50	**4.74**

Project Name:	**Monitoring and optimizing the performance of rubber effluent treatment plants in Sri Lanka to improve the treatment efficiency and ensure**

CF MPI

Month (2022)		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sep.	Oct.	Nov.	Dec.	Total
Financial Requirement (Rs.Mn)	Recurrent													
	Capital	0.85	0.86	0.86	1.10	1.10	1.10	1.61	1.62	1.62	0.18	0.19	0.19	**11.28**

Project Name:	**Studies on the biology and epidemiology of the Pestalotiopsis Leaf fall disease and to develop effective management strategies**

CF MPI

Month (2022)		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sep.	Oct.	Nov.	Dec.	Total
Financial Requirement (Rs.Mn)	Recurrent													
	Capital	0.48	0.48	0.49	1.55	1.55	1.55	0.61	0.62	0.62	0.48	0.47	0.47	**9.37**

ACTION PLAN 2022
RUBBER RESEARCH INSTITUTE OF SRI LANKA

Thrust Area
Recommendations on technologies and technology transfer to enhance productivity and profitability of rubber cultivation and rubber product manufacturing through research and development activities

Major research & development tasking2022

1. Establishment of tyre testing center and provide testing facilities for different forms of raw rubber and rubber products to promote the product development sector.
2. Promote rubber cultivation targeting the poverty alleviation in the peasant community, particularly in nontraditional areas
3. Development and promotion of Low Frequency Harvesting systems among rubber growers to reduce the cost of production and to improve worker use efficiency.
4. Development of new clones with high yields, vigour, drought and disease resistance
5. Improvement in land productivity of rubber through the knowledge enhancement and skill development in the plantation sector.
6. Promotion of SMEs in rubber product manufacture with knowledge inputs and by assisting in troubleshooting.
7. Promoting the control of white root disease in rubber lands in view of increasing the land productivity.
8. Developing carbon credits for the voluntary carbon market with rubber grown in nontraditional areas.
9. Optimization of land use with different types of rubber based intercropping systems and crop diversification in unutilized lands.
10. Development of area/ site specific fertilizer recommendation to maximize fertilizer use efficiency.
11. Carrying out research to facilitate rubber associated product development for value addition.
12. Provide testing facilities for different forms of raw rubber and rubber products to promote the product development sector.
13. Assisting to develop and refine the statistical applications used in the rubber industry.
14. Testing new methodologies to control pests & diseases and weeds in rubber lands
15. Promotion of rubber as a cleaner industry in environmental management.
16. Be vigilant on new pest and disease threats to rubber cultivation.
17. Impact evaluation of different policies in the rubber sector.
18. Development of software application (App) for IT assisted extension network in technology transfer.
19. Feasibility studies in developing ecotourism in rubber plantations
20. Promoting integrated fertility management systems in rubber with organic and slow release fertilizer

Allocation of funds for the January to December 2022 (Rs. Million)

Source of fund	Capital	Recurrent	Total
Consolidated fund	**30.00**	**400.00**	**430.00**
Consolidated fund – Thro SMTR	**60.00**	**-**	**60.00**
Generated fund	**-**	**25.00**	**25.00**
Grand Total	**90.00**	**425.00**	**515.00**

RUBBER RESEARCH INSTITUTE OF SRI LANKA

Procurement Plan for year 2022

Annex 5i

Dept./Line Agency/ Ministry	Procurement Category (Goods, Works & Services etc.)	Estimated Cost Rs.(Mn)	Source of finance name of Donor	Procurement method (CB, LIB, LNB, NCB and National shopping etc.)	Level of Authority	Priority status U-Urgent / P-Priority N- Normal	Current Status procurement preparedness activities	Schedule Date of Commencement	Schedule date of completion	Financial Targets (Rs. Mn)				Remarks
										Q1	Q2	Q3	Q4	
	GOODS									**Q1**	**Q2**	**Q3**	**Q4**	
	Furniture and Office Equipment			National Competitive Bidding (NCB) / Restricted National Competitive Bidding (LNB) / Shopping as applicable in accordance with procurement guidelines for goods/ works and services			Awaiting Necessary Approvals							
	Plant, Machinery & Equipment													
	Other Laboratory Equipment	2.50	CF		DPC(Minor)	P		01.01.2022	30.06.2022		2.50			
	Purchases of Motor Vehicles													
	Library Books													
	WORKS													
	Building Rehabilitation & Improvements Building													
	Structures-Repairing of Internal Roads													
	Maintenance of Buildings	1.50	CF		DPC(Minor)	P		01.01.2022	30.06.2022		1.50			
	Research Projects													
	Research and Development	18.50	CF		DPC(Minor)	P		01.01.2022	31.12.2022	4.63	4.63	4.63	4.63	
	New Research projects	-												

Procurement Plan for year 2022

Dept./Line Agency/ Ministry	Procurement Category (Goods, Works & Services etc.)	Estimated Cost Rs.(Mn)	Source of finance name of Donor	Procurement method (CB, LIB, LNB, NCB and National shopping etc.)	Level of Authority	Priority status U-Urgent / P-Priority N- Normal	Current Status procurement preparedness activities	Schedule Date of Commencement	Schedule date of completion	Financial Targets (Rs. Mn)				Remarks
										Q1	Q2	Q3	Q4	
	SERVICES			National Competitive Bidding (NCB) / Restricted National Competitive Bidding (LNB) / Shopping as applicable in accordance with procurement guidelines for goods/ works and services										
	Lands and Land Improvements- R&D	0.50	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.13	0.13	0.13	0.13	
	Monaragala Substation Nursery	4.80	CF		DPC(Minor)	P		01.01.2022	31.12.2022	1.20	1.20	1.20	1.20	
	Establishment of Adaptive Research Trails, Polgahawela	0.20	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.05	0.05	0.05	0.05	
	Establishment of Research (Eastern and Northern) Provinces	0.50	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.13	0.13	0.13	0.13	
	Human Capital Development Project (Foreign/Local)	1.50	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.38	0.38	0.38	0.38	
	Sub Total	**30.00**						-	-	**6.50**	**10.50**	**6.50**	**6.50**	
	Special Capital Projects- MPI													
	Screening of drought/stress tolerant Hevea Clones for sustainable rubber cultivation in marginal areas	4.74	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.49	1.89	1.22	1.14	
	Establishment of accredited laboratory and enhancement of testing facilities for rubber industry in Sri Lanka	19.23	CF		DPC(Minor)	P		01.01.2022	31.12.2022	0.12	0.55	18.01	0.55	

Procurement Plan for year 2022

Dept./Line Agency/ Ministry	Procurement Category (Goods, Works & Services etc.)	Estimated Cost Rs.(Mn)	Source of finance name of Donor	Procurement method (CB, LIB, LNB, NCB and National shopping etc.)	Level of Authority	Priority status U-Urgent / P-Priority N- Normal	Current Status procurement preparedness activities	Schedule Date of Commencement	Schedule date of completion	Financial Targets (Rs. Mn)				Remarks
										Q1	Q2	Q3	Q4	
	Establishment of environmental friendly, economically viable slow release fertilizer technique	15.38	GF	National Competitive Bidding (NCB) / Restricted National Competitive Bidding (LNB) / Shopping as applicable in accordance with procurement guidelines for goods/ works and services	DPC (Minor)	P		01.01.2022	31.12.2022	1.59	6.12	3.97	3.69	
	Monitoring and optimizing the performance of rubber effluent treatment plants	11.28	CF		DPC (Minor)	P		01.01.2022	31.12.2022	1.17	4.49	2.91	2.709	
	Studies on the biology and epidemiology of the Pestalotiopsis Leaf fall disease and to develop effective management strategies	9.37	CF		DPC (Minor)	P		01.01.2022	31.12.2022	0.97	3.73	2.42	2.25	
	Sub Total	**60.00**								**4.34**	**16.78**	**28.54**	**10.34**	
	Total	**90.00**								**10.83**	**27.28**	**35.04**	**16.84**	

Action Plan for Capital Expenditure – 2022 **Rs. Mn.**

S. No	Programme	Project	Activities		Financial Targets (Rs. Mn)				Remarks
					Q1	Q2	Q3	Q4	
1	Upgrading the modern technology of RRISL Services.	Purchase of Laboratory Equipment	Purchase of Laboratory Equipment for research departments	**F**					
				P					
		Purchase of Machinery & Equipment	Purchase of plant, machinery & equipment for Workshop, Audio visual unit & research departments	**F**		2.50			Mr. Priyantha Peris - NA
				P		100%			Tel 0342247426
2	Providing the effective working environment	Purchase of Office Furniture & Office equipment	Purchase of Office Furniture & Office equipment for Re-furnishing of research departments	**F**					
				P					
3	Maintenance the working environment with sufficient facilities	Maintenance of Buildings	Maintenance of Buildings	**F**		1.50			Mr. K Chathuranga RE / Mrs. C. Wijesekara
				P		100%			RE Tel 0342247426
4	Providers the working environment with sufficient space	Rehabilitation & Improvements Building	Rehabilitation & Improvements Building for Workshop, & research departments	**F**					
				P					
5	Improving the HR by introducing the knowledge materials	Purchase of Books	Purchase of Library Books	**F**					
				P					
6	Improving land productivity	Lands & Land improvements	Establish adaption research plots	**F**	0.13	0.13	0.13	0.13	Dr Enoka Munasinghe - PRO
				P	25%	25%	25%	25%	Tel 0342247426
7	Upgrading the nurseries	Monaragala Substation Nursery	Establishment of Monaragala Substation Nursery.	**F**	1.20	1.20	1.20	1.20	Actg. DDR (B)
				P	25%	25%	25%	25%	Tel 0342247426

8	Maintenance of mature and in immature rubber fields	Polgahawela Substation Nursery	Establishment of Adaptive Research Trails, Polgahawela	**F**	0.05	0.05	0.05	0.05	Mr. P. A. Lakshman - SME Tel 0342247426
				P	25%	25%	25%	25%	
9	Poverty alleviation with rubber cultivation	Eastern and Northern rubber cultivation	Establishment of Adaptive Research trails (Eastern and Northern) Provinces	**F**	0.13	0.13	0.13	0.13	Dr. E. S. Munasinghe, - PRO
				P	25%	25%	25%	25%	Tel 0342247426
10	Human Capital Development Programme	Training of staff members (Foreign/Local)	Providing Continuous Professional Developments. (CPD)	**F**	0.38	0.38	0.38	0.38	Mr. D.M.S. Dissanayake - SAO Tel 0342247426
				P	25%	25%	25%	25%	
	Total (Rs. Mn. 30.00)			**F**	**6.50**	**10.50**	**6.50**	**6.50**	
				P	**21.66%**	**35%**	**21.67%**	**21.67%**	

Annex 3

Action Plan for Revenue Collection

Rs. Mn.

No	Objectives	Strategy	Activities	Key Performance Indicators	Time Frame				Output/ Outcome (Rs. Mn)	Responsible Officer
					Q1	Q2	Q3	Q4		
1	To serve the rubber products manufacturing companies by testing rubber compounds & products and plantation companies by testing crepe rubber & polythene	Promote value added raw rubber and rubber related other products	*Testing of rubber compounds * Testing of rubber products *Testing of crepe rubber *Testing of polythene	Number of samples tested	0.05	0.13	0.23	0.30	0.30	Dr. D. G. Edirisinghe
2	To provide advanced testing services for polymer industry		Providing testing services, troubleshooting and training programs	No. of services provided	0.60	1.00	2.00	2.50	2.50	Y. R. Somarathne I.H.K. Samarasinghe
3	Empower the raw rubber producers, rubber exporters and small and medium scale industrialists with the laboratory testing facilities.	Encouraging rubber latex products at local and foreign market	Provide testing services to rubber industry	No of test reports issued	1.00	1.50	2.50	4.00	4.00	Dr. Anusha Attanayake
	Enhance soil fertility under mature rubber	Site specific fertilizer recommendation for mature rubber	Collection of leaf samples and field parameters at different sites	Number of site specific fertilizer recommendation reports provide		0.75	1.50	2.00	2.00	Dr. R. P. Hettiarachchi, H A R K Jayawardana, T.S.Liyanaarachchi
	Selection of suitable lands for rubber planting	Land suitability evaluation programme	Collection of soil, observe field parameters and GPS information at different sites	Number of land suitability reports provide	0.02	0.04	0.10	0.15	0.15	

	Assure the application of quality fertilizers	Analytical service	Testing fertilizer, soil, leaf, water and compost samples according to the SLS guidelines	Number of analytical reports provide	0.40	0.80	1.20	1.60	1.60	
	HRD in rubber industry	Promote knowledge transfer activities	Sale of Publications	No. of Publications sold	0.10	0.20	0.35	0.50	0.50	Mrs. Chanika, Librarian
			Sundry Income		1.00	2.00	3.00	4.00	4.00	Mr. Sujith Hewage, SA
			Monaragala Income	Amount of products sold	1.00	2.00	3.00	4.00	4.00	DDR (B)
			Training Programmed N'kale	No. of event	0.15	0.32	0.52	0.85	0.85	DDR (B)
			Hire of Auditorium, Guest House etc.		0.02	0.04	0.06	0.10	0.10	Mr. Susantha, SAO
	Improve yield per Ha	Replant low productive lands	Sale of rubber	Production Qty.	1.00	2.00	4.00	5.00	5.00	Mr. P A Lakshman SME
					5.34	**10.78**	**18.46**	**25.00**	**25.00**	

DISTRIBUTION AMONG THE DIFFERENT DIVISSIONS – January/ December 2022 **Rs. Mn**

Programme & Project 1. Name 2. Duration 3. TEC & Source of Funds	Activity	R&D Estimate (Rs. Mn) 2022	Source of funds DF&GF		R&D Targets (Rs. Mn) Jan - Dec	Output	Responsible Officer Name Designation
Plant Science Dept.	Research & Development Activities and providing services on all aspects of Natural Rubber	2.71	CF&GF	**FT**	2.71	Two alternative sowing media for river sand recommended, One improved irrigation technique identified (25% progress in 2020), One protocol for one crop developed, Cost benefits of two planting densities quantified, Availability of Certified rubber plants from produced (Government, RPCs and private nurseries), Two intercropping models identified, One improved tapping technique tested, All requested training programmes and troubleshooting attended	Mr. T. U. K. Silva, SRO
Plant Pathology Dept.		1.99	CF&GF	**FT**	1.99	Recommendation of Corynespora resistant Hevea clones - 25 Identification of effective pesticides to control diseases - 01, new reports 01, publications 02, Identification of new beneficial microbes Microboal applications, Trained stakeholders	Dr. (Mrs). S. Fernando, Head
Genetics & Plant Breeding Dept.		1.99	CF&GF	**FT**	1.99	2500 HPs progenies, Evaluate two HP progenies, Establish 10 clones, Exchanged 5 clones, Two selected for commerciality, Three genotype for interim recommendation, One genotype identified for smallholder, Characterized 02 genotypes	Dr.(Mrs)S.P.Withanage, Head
Soils & Plant Nutrition Dept.		1.49	CF&GF	**FT**	1.49	Introduction of environmental friendly product, Effective weed control method, fertilizer recommendation for nontraditional areas, Three bio efficacy report issued, Introduction of a effective fertilizer management system, Mapping soil spatial variability of selected rubber plantations, Quantification of the variability of Silicon and micro nutrients, Determination of Sulphur status in Agalawatta soil series, Survey 5000 ha of rubber lands and provide 40 - 50 site specific fertilizer recommendation reports, Survey 500 ha of land for planting rubber Provide 3 - 5 land suitability reports, Assess 4000 parameters and provide 120 analytical reports and	Dr.(Mrs). Rasika Hettiarachchi Head
Biochemistry Dept.		0.94	CF&GF	**FT**	0.94	20% development of weekly harvesting system, 20% development of d4 double cut system, 25 sites, 10 genotypes tested, 10 genotypes tested, 10 sites, 10% development, 3 sites, 2 formulations	Dr. (Mrs) S. Kudaligama, Head

DISTRIBUTION AMONG THE DIFFERENT DIVISSIONS – January/ December 2022 **Rs. Mn**

Programme & Project 1. Name 2. Duration 3. TEC & Source of Funds	Activity	R&D Estimate (Rs. Mn) 2022	Source of funds DF&GF		R&D (Rs. Mn) Jan – Dec	Output	Responsible Officer Name Designation
ASD & Training Centre	Research & Development Activities and providing services on all aspects of Natural Rubber	0.46	CF&GF	**FT**	0.46	• Technology transfer to 240 holdings, 03 villages and 35 estates • Established 30 processing centers, 4 model estates and 4 demonstration plots, • Trained 250 rubber farmers, 500 estate managers, estate field staff and workers, 200 new harvesters, 25 village youth and 50 estate youth, • Established 02 Technology transfer centers and One Techno-Park	Mr. Sanjeewa Gunarathne, AO
R.R. & C.A. Dept.		1.66	CF&GF	**FT**	1.66	Quality control of raw rubber, Introduce new chemical to reduce yellowish colour in crepe rubber, Introduce new clones with good raw rubber properties, Recommendation based on raw rubber properties	Mrs. A.P. Attanayake SRO
R.R.P.D& C.E. Dept.		1.50	CF&GF	**FT**	1.50	Novel chemical and processes for manufacture of deprotenised natural rubber, novel chemical and process for manufacture of deprotenised rubber, a process for development of advanced foam rubber, Semi-mechanized raw rubber manufacturing process, single day crepe rubber dying system, Cost effective effluent treatment technologies, Advanced mobile app for raw rubber processing, appropriate technologies for clients	Dr. S. Siriwardane, DDR (T)
RT & D		2.48	CF&GF	**FT**	2.48	150 entrepreneurs / industries benefited, 8 new rubber products, 2 novel rubber products	Dr (Mrs).D.G. Edirisinghe, Head
Polymer Chemistry Dept.		1.99	CF&GF	**FT**	1.99	Nitrosamine safe rubber products, Environmental safe preservative system, Value added natural rubber grade, Value added natural rubber composites, Client assistant programs and testing services	Mr. Y. R. Somarathne, RO

DISTRIBUTION AMONG THE DIFFERENT DIVISSIONS – January/ December 2022 **Rs. Mn**

Programme & Project 1. Name 2. Duration 3. TEC & Source of Funds	Activity	R&D Estimate (Rs. Mn) 2022	Source of funds DF&GF		R&D (Rs. Mn) Jan – Dec	Output	Responsible Officer Name Designation
Adaptive Research Unit	Research & Development Activities and providing services on all aspects of Natural Rubber	0.61	CF&GF	**FT**	0.61	Protocols for rubber cultivation in dry zone developed, Impact of rubber cultivation on livelihood in nontraditional areas quantified, Two new areas feasible for rubber cultivation identified, Area specific farming models established, Smallholder on-farm productivity and variability in Kegalle and Kurunegala districts identified, Psycosocioeconomic status of plantation workforce identified	Dr. (Mrs). E. S, Munasinghe, PRO
Biometry Section		0.36	CF&GF	**FT**	0.36	Research support for 30 projects identified for 2021 Action Plan, 02 developments/modifications/applications and subsequent publications	Dr. W. Wijesuriya, PRO
Agriculture Economic		0.32	CF&GF	**FT**	0.32	Change in rubber growth identified, District base poverty indicators developed, Sustainability measures identified, Farm typologies of rubber-based farming developed, New Policy guidelines formulated, Awareness reports for the general public, Rubber yield map, Feasibility report on ecotourism	Mr. J. K. S. Sankalpa SRO
Funds		**18.50**			**18.50**		
Other Capital		**11.50**			**11.50**		
Total Funds		**30.00**			**30.00**		

DISTRIBUTIONAMONG THE DIFFERENT DIVISSIONS – January/ December 2022 (Recurrent)

Programmed & Project 1. Name 2. Duration 3. TEC & Source Of Funds	Allocation for 2022			Activity based budget			Source of funds	Financial Quarterly Targets				Responsible Officer's Name Designation
	CF	GF	Total (Rs. Mn)	Emoluments (Rs.mn)	Other (Rs. Mn)	Total	CF&GF	Q1	Q2	Q3	Q4	
Plant Science Dept.	35.93		35.93	30.54	5.39	35.93	CF&GF	8.98	8.98	8.98	8.98	Mr. T. U. K. Silva, SRO
Plant Pathology Dept.	4.37		4.37	1.13	3.23	4.37	CF&GF	1.09	1.09	1.09	1.09	Dr.(Mrs.).S. Fernando, Head
Genetics & Plant Breeding Dept.	33.96		33.96	29.24	4.73	33.96	CF&GF	8.49	8.49	8.49	8.49	Dr.(Mrs.)S.P.Withanage, Head
Soils & Plant Nutrition Dept.	22.56		22.56	19.29	3.27	22.56	CF&GF	5.64	5.64	5.64	5.64	Dr.(Mrs.). Rasika Hettiarachchi, Head
Biochemistry Dept.	11.29		11.29	8.98	2.31	11.29	CF&GF	2.82	2.82	2.82	2.82	Dr. (Mrs.) S. Kudaligama, Head
ASD & Training	48.00		48.00	41.26	6.74	48.00	CF&GF	12.00	12.00	12.00	12.00	Mr. Sanjeewa Gunarathne, AO
R.R. & C.A. Dept.	15.16		15.16	12.85	2.31	15.16	CF&GF	3.79	3.79	3.79	3.79	Mrs. A.P. Attanayake , SRO
R.R. & C.E. Dept.	16.65		16.65	14.15	2.49	16.65	CF&GF	4.16	4.16	4.16	4.16	Dr. S. Siriwardena, DDR (T)
RT & D	21.26		21.26	18.16	3.10	21.26	CF&GF	5.31	5.31	5.31	5.31	Dr (Mrs.).D.G. Edirisinghe, Head
Polymer Chemistry Dept.	13.04		13.04	10.77	2.28	13.04	CF&GF	3.26	3.26	3.26	3.26	Mr. Y. R. Somarathne, RO
Adaptive Research	15.98		15.98	13.80	2.18	15.98	CF&GF	4.00	4.00	4.00	4.00	Dr. (Mrs.). E. S, Munasinghe, PRO
Biometry Section	8.99		8.99	7.72	1.27	8.99	CF&GF	2.25	2.25	2.25	2.25	Dr. W. Wijesuriya, PRO
Agri.Econ.	2.92		2.92	2.24	0.68	2.92	CF&GF	0.73	0.73	0.73	0.73	Mr. J. K.S. Sankalpa, SRO

Programmed & Project 1. Name 2. Duration 3. TEC & Source Of Funds	Allocation for 2022			Activity based budget			Source of funds	Financial Quarterly Targets				Responsible Officer's Name Designation
	CF	GF	Total (Rs. Mn)	Emoluments (Rs.mn)	Other (Rs. Mn)	Total	CF&GF	Q1	Q2	Q3	Q4	
Library	6.18		6.18	5.29	0.88	6.18	CF&GF	1.54	1.54	1.54	1.54	Mr.D.M.S.Dissanayake SAO
Director's Office	18.23		18.23	15.46	2.77	18.23	CF&GF	4.56	4.56	4.56	4.56	Director/ Additional Director
DDR (B)	4.75		4.75	3.65	1.10	4.75	CF&GF	1.19	1.19	1.19	1.19	-
DDR (T)	4.75		4.75	3.65	1.10	4.75	CF&GF	1.19	1.19	1.19	1.19	Dr. S. Siriwardane DDR (Tech)
Board Office	14.87		14.87	12.32	2.55	14.87	CF&GF	3.72	3.72	3.72	3.72	Chairman
Administration Dept.	14.92	25.00	39.92	31.30	8.62	39.92	CF&GF	9.98	9.98	9.98	9.98	Mr.D.M.S.Dissanayake SAO
Accounts Dept.	28.25		28.25	23.71	4.54	28.25	CF&GF	7.06	7.06	7.06	7.06	Mr. S. S. Hewage, Senior Accountant
Works Section	49.86		49.86	37.68	12.18	49.86	CF&GF	12.46	12.46	12.46	12.46	Mr. Kamantha Chathuranga, Engineer
Stores	3.30		3.30	2.73	0.58	3.30	CF&GF	0.83	0.83	0.83	0.83	Mr. S. S. Hewage, Senior Accountant
Internal Audit Unit	4.78		4.78	4.07	0.72	4.78	CF&GF	1.20	1.20	1.20	1.20	Mrs. S. Senadheera, Internal Auditor
	400.00	**25.00**	**425.00**	**350.00**	**75.00**	**425.00**		**106.25**	**106.25**	**106.25**	**106.25**	

Detailed Action Plan for Research &Development: -Agronomy Departments

Annex 2

Genetics & Plant Breeding Department (Rs. Mn. 1.99)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Breeding Selection and Evaluation of new Genotypes using Conventional and Molecular Breeding Strategies								**1.24**		**0.1775**		**0.5515**		**0.2905**		**0.2275**			
1.1	Annual hand pollination programme	2	12		CF	No.	Produce 150 new genotypes to the breeding pool	0.10	5%	0	80%	0.08	15%	0.02	0	0	Add clones to the recommendation	Strengthen the genetic diversity and productivity of the industry also accelerate the breeding process	
1.2	Preliminary evaluation of HP mother plants						Evaluate two progenies	0.01	10%	0.008	60%	0.002	30%	0	0	0			
1.3	Maintenance and re-establishment of bud wood nurseries and HP progenies.						Establish 10 bud wood plots	0.01	10%	0.002	70%	0.005	20%	0.003	0	0			
1.4	Preparation of experimental planting materials.						Prepare 10 ECT trials	0.21	10%	0.01	70%	0.2	20%	0.01	0	0			
1.5	Development of clone Museum						Add 10 clones	0.04	10%	0.01	70%	0.02	20%	0.01	0	0			
1.6	Multilateral clone exchange programme						Exchange with two countries	0.30	10%	0	30%	0.1	30%	0.1	30%	0.1			
1.7	Small scale evaluation of new genotypes (SSCTs)						Data collection of existing trials	0.15	25%	0.04	25%	0.04	25%	0.04	25%	0.03			

1.8	Evaluation of selected HP entries under estate collaborative level (ECTs)	2	12		CF	No.	Data collection of existing trials	0.15	25%	0.04	25%	0.04	25%	0.04	25%	0.03			
1.9	Evaluation of selected HP entries in collaborating with smallholders in traditional rubber growing areas (SRTs)						Data collection of existing trials	0.1	25%	0.025	25%	0.025	25%	0.025	25%	0.025			
1.10	Development of suitable clones for smallholders in non-traditional rubber growing areas to accelerate new planting and to expand the cultivation						Data collection of existing trials	0.17	25%	0.0425	25%	0.0425	25%	0.0425	25%	0.0425			
2. Breeding selection and evaluation of new genotypes using Molecular strategies								**0.75**		**0**		**0.45**		**0.55**		**0.75**			
2.1	Marker assisted selection for superior genotypes with REF gene/ REF promoter screening the 2014 /2015 HP progeny				CF	No.	05 selections	0.75	5%	0	40%	0.45	70%	0.55	100%	0.75			

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Ensuring the availability of raw materials necessary for the rubber industry by providing encouragement for the development of cultivations of small and medium scale rubber estate owners								**1.17**		**0.34**		**0.29**		**0.25**		**0.29**			
1.1	Improvement of growth and abiotic stress tolerance in rubber plants	9	8	6	CF	Nursery Medium	1	0.27	25%	0.05	25%	0.05	25%	0.07	25%	0.10	Two alternative sowing media for river sand recommended	Reduction of cost of production, Productivity improvement	
1.2	Different planting strategies and improved irrigation systems for rubber nurseries and field plants					Irrigation systems	1	0.35	25%	0.15	25%	0.10	25%	0.05	25%	0.05			
1.3	Tissue culture and micropropagation of rubber and other crops					No. of Methods	1	0.40	25%	0.10	25%	0.10	25%	0.10	25%	0.10			
1.4	Planting at different densities to obtain maximum economic return from latex and timber					Plant density	1	0.15	25%	0.04	25%	0.04	25%	0.03	25%	0.04			
2. Programme/ Project: Ensuring the availability of raw materials necessary for the rubber industry by providing encouragement for the development of cultivations of small and medium scale rubber estate owners								**0.12**		**0.03**		**0.03**		**0.03**		**0.03**			
Inspection and certification of nursery plants (ongoing project)		6	8	6	CF	No. of plants	2000000	0.12	500000	0.03	500000	0.03	500000	0.03	500000	0.03	Certification of all rubber	Increase rubber land	

3. Programme/ Project: Introducing other crops to be grown around tea and rubber estates							**0.50**		**0.15**		**0.10**		**0.10**		**0.15**			
Evaluation of intercrops under rubber	**6**	**8**	**5**	**CF**	Models	2	0.50	25%	0.15	25%	0.10	25%	0.10	25%	0.15	Two intercropping models tested/ evaluated	Additional income generation through intercropping a number of crops with rubber	
4. Programme/ Project: Ensuring the availability of raw materials necessary for the rubber industry by providing encouragement for the development of cultivations of small and medium scale rubber estate owners							**0.56**		**0.15**		**0.15**		**0.16**		**0.10**	One improved tapping technique tested	Productivity improvement in rubber lands	
Testing of different tapping systems	**3**	**8**	**8**	**CF**	Tapping systems	1	0.56	25%	0.15	25%	0.15	25%	0.16	25%	0.10			
5. Programme/ Project: Ensuring the availability of raw materials necessary for the rubber industry by providing encouragement for the development of cultivations of small and medium scale rubber estate owners							**0.36**		**0.06**		**0.10**		**0.10**		**0.10**	All requested training programmes and troubleshooting attended	Improved productivity with good agricultural practices for sustainability	
Conduct training programmes / make advisory visits on nursery techniques, planting, tapping and intercropping	**10**	**8**		**CF**	No. of Programs /advisory	50	0.36	10	0.06	20	0.10	10	0.10	10	0.10			

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Replanting Screening of chemicals to control pest and diseases and clones to identify disease resistant clones								**0.46**		**0.10**		**0.13**		**0.13**		**0.10**	Recommendation of effective pesticides to control diseases Recommendation of disease resistant clone	Maintenance of healthy plantation to sustain the productivity level	
1.1	Screening of chemical pesticide to effectively control the diseases	5	G2	1	CF	No of pesticides	8	0.46	25%	0.10	25%	0.13	25%	0.13	25%	0.10			
1.2	Screening of *hevea* clones against the economically important diseases					No of clones	50												
2. Programme/ Project: Studies on the biology and molecular biology of pests								**0.52**		**0.11**		**0.14**		**0.14**		**0.13**	Publications - 04	Generation of new knowledge on pathogen life cycles	
2.1	Biology and molecular biology of leaf and stem disease pathogens	5	G2	1	CF	Publications	4	0.52	25%	0.11	25%	0.14	25%	0.14	25%	0.13			
2.2	Biology and molecular biology of leaf and root disease pathogens					Publications	4												

3. Programme/ Project: Studies on beneficial microbiology to explore methods to promote small scale cottage industries and to strengthen the microbiological testings								**0.52**		**0.11**		**0.14**		**0.14**		**0.13**	Micro cultures 100 Microbiological application2	Support the green technologies	
3.1	Maintenance of national culture collection	**5**	**G2**	**1**	**CF**	Microbe cultures	100	0.52	25%	0.11	25%	0.14	25%	0.14	25%	0.13			
3.2	Development of microbiological applications					Microbe applications	2												
4. Surveillance of potential pests and disease outbreaks to avoid unwanted sudden disease epidemics - Advisory & Training Programmes								**0.49**		0.10		0.13		0.13		0.13	Early warnings to mitigate diseases advisory and training programmes	Empowering the stakeholders to mitigate disease conditions	
4.1	Surveys to Identify destructive disease condition and making early warnings	**4**	**G2**	**1**	**CF**	Early warnings	6	0.49	25%	0.10	25%	0.13	25%	0.13	25%	0.13			
4.2	Advisory services					Advisory visits	80												
4.3	Training programmes					Training programmes	12												

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1	**Programme/ Project: Evaluate the effectiveness of environmental friendly agro-management practices for enhancing fertility in rubber soils (2018 – 2025)**							**0.347**		**0.08675**		**0.08675**		**0.08675**		**0.07675**	Introduction of environmental friendly product	Enhance plant growth	
1.1	Testing of different organic and biofertilizer for soil improvement	2	2	7	GF	No of organic product developed	1	0.347	25%	0.08675	25%	0.08675	25%	0.08675	25%	0.07675			
2	**Programme/ Project: Introduction of new fertilizer application techniques for nontraditional rubber growing areas (2022 – 2024)**							**0.228**		**0.057**		**0.057**		**0.057**		**0.047**	fertilizer recommendation for nontraditional areas	Enhance soil fertility and plant growth	
2.1	Testing different fertilizer mixtures and levels	2	2	7	GF	Develop suitable fertilizer mixture for nontraditional rubber	1	0.228	25%	0.057	25%	0.057	25%	0.057	25%	0.047			
3	**Programme/ Project: Effect of nutrient management on the Pestalotiopsis disease in rubber (2020 – 2022)**							**0.1735**		**0.05205**		**0.05205**		**0.0347**		**0.0247**			
3.1	Developing fertilizer management system to control pesta	2	2	7	GF	Development level of fertilizer management system	1	0.1735	30%	0.05205	30%	0.05205	20%	0.0347	20%	0.0247	Introduction of a effective fertilizer mgt.	Enhance plant growth	

4	**Programme/ Project: Establishment of site specific management zones under traditional rubber plantations for variable rate fertilizer (VRF) application via geo-spatial and geo-statistical approaches (2021 - 2022)**	2	2	7	GF	Number of samples collected and soil maps prepared	1	**0.298**	15%	**0.0447**	25%	**0.0894**	40%	**0.1192**	20%	**0.0347**	Mapping soil spatial variability of selected rubber plantations	Enhance soil fertility	
5	**Programme/ Project: Evaluation of the effect of Rubber Processing Effluent on Soil Properties and as a nutrient source (2021-2022)**	2	2	7	GF	No of soil properties analyzed	7	**0.1735**	25%	**0.043375**	25%	**0.043375**	25%	**0.043375**	25%	**0.033375**	Introduction of safe effluent disposal system to soil	reduction of the cost of effluent treatment	
6	**Programme/ Project: Issuing certification for land suitability, site specific fertilizer applications and analyzing fertilizer samples (2018 – 2025)**							**0.27**		**0.615**		**0.0475**		**0.965**		**0.068**			
6.1	Collection of leaf samples and field parameters at different sites+B24:S25	2	2	7	GF	Number of site specific fertilizer recommendation reports provide	40	0.14	10%	0.014	35%	0.049	35%	0.049	20%	0.029	Provide 40 - 50 site specific fertilizer recommendation reports& survey 5000 ha of rubber land	Optimize fertility levels	

6.2	Collection of soil, observe field parameters and GPS information at different sites					Number of land suitability reports provide	5	0.05	25%	0.0125	25%	0.0125	25%	0.0125	25%	0.015	Provide 3 - 5 land suitability reports and survey 500 ha of land for planting rubber	ensure high return on investment	
6.3	Testing fertilizer, soil, leaf, water and compost samples according to the SLS guidelines					Number of analytical reports provide	100	0.08	25%	0.015	25%	0.025	25%	0.015	25%	0.025	Provide 120 analytical reports and assess 4000 parameters	Assure the application of quality fertilizers	

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Research, development and commercial introduction of low intensity harvesting strategies								**0.3**		**0.04**		**0.04**		**0.1**		**0.12**	Adoption of LIH systems	Reduce cost of production. Increase economical lifespan of plantations. Reduce	
1.1	Developing low intensity harvesting strategies	4		8	CF	Development	%	0.15	25%	0.02	25%	0.02	25%	0.05	25%	0.06			
1.2	Development of site specific stimulation protocols for LIH					Ha.	50	0.15	10	0.02	10	0.02	20	0.05	10	0.06			
2. Programme/ Project: Research and development on biochemical and physiological aspects to improve the sustainability of rubber farming								**0.64**		**0.11**		**0.14**		**0.18**		**0.21**			
2.1	Identification of quality of latex of new genotypes developed	4		8	CF	Genotypes	15	0.1	3	0.02	4	0.02	4	0.03	4	0.03	Productivity improvement.	Strengthen the clone selection programme. Maximize harvesting stratergies.	
2.2	Identification of physiological and biochemical changes of genotypes grown under suboptimal climates					Genotypes	10	0.17	2	0.03	2	0.04	3	0.05	3	0.05			
2.3	Developing a method to identify yielding capacity of genotypes during early screening stages					Development	%	0.17	15%	0.04	25%	0.04	25%	0.04	35%	0.05			

2.4	Identification of effect of new leaf disease on latex diagnosis and yield determinant factors	4		8	CF	Development	%	0.1	25%	0.01	25%	0.02	25%	0.03	25%	0.04	Productivity improvement.	Strengthen the clone selection programme. Maximize harvesting stratergies.	
2.5	Effectiveness of early morning tapping on yield and related parameters					Development	%	0.1	20	0.01	20	0.02	30	0.03	30	0.04			

Adaptive Research Unit (Rs. Mn. 0.61)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
									Q1		Q2		Q3		Q4				
						Unit	No.		P	F	P	F	P	F	P	F			
1. Programme/ Project: Expansion of rubber cultivation to nontraditional areas								**0.41**		**0.082**		**0.082**		**0.122**		**0.124**			
1.1	Development of suitable protocols to cultivate rubber in Dry Zone (92%)	5,6	1a 1.2		CF	No. of technologies refined	96%	0.130	93%	0.026	94%	0.026	95%	0.039	96%	0.039	Protocols for rubber cultivation in dry zone developed	Issuance of recommendations for drier climates	
1.2	Assessments on socioeconomic impact of rubber cultivation in nontraditional areas (74%)					No. of impact assessments	90%	0.075	76%	0.015	80%	0.015	85%	0.022	90%	0.023	Impact of rubber cultivation on livelihood in nontraditional areas quantified	Attract farmers in dry zone to rubber cultivation	

1.3	Identification of agronomic and socio-economic feasibility for rubber cultivation in new areas of dry zone (40%)	5, 6	1a 1.2		CF	No. of DS divisions identified	2	0.130	45%	0.026	50%	0.026	55%	0.039	60%	0.039	New areas feasible for rubber cultivation identified (02 no.)	Introduction of rubber to new areas in dry zone	
1.4	Identification of suitable farming models for new areas (16%)					No. of farming models established	2	0.075	20%	0.015	25%	0.015	30%	0.022	35%	0.023	Area specific farming models established (02 no.)	Livelihood of farmers improved in in nontraditional areas	
2. Programme/ Project: Productivity improvement through technology development								**0.20**		**0.050**		**0.050**		**0.050**		**0.050**			
2.1	Assess the harvesting techniques adoption and its impact on productivity and the economic life span of the rubber cultivations in the smallholder sector (0%)	5, 6	4.1, 5, 10.4		CF	No. of smallholder fields assessed	60	0.100	20%	0.025	50%	0.025	75%	0.025	100%	0.025	Level of adoption in harvesting technique identified	Remedial measures to enhance productivity proposed	
2.2	Identification of gender issues, child protection and education systems among plantation workers (40%)					No. of indices developed	3	0.100	47%	0.025	55%	0.025	62%	0.025	70%	0.025	Psycosocioeconomic status of plantation workforce identified	Secure the work force of plantation community	

Biometry Section (Rs. Mn.0.36)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1.Programme/ Project: Improving the reliability of interpretations of research projects through appropriate statistical methods (Continuous)								**0.14**									Research support for 20 projects identified for 2022 Action Plan	Reliable recommendations through appropriate statistical methodologies (Experimentations, Analysis & Interpretation)	
1.1	Research support for research projects conducted by RRISL	No. of research projects benefited	NA		CF	No. of projects analyzed	20	0.07	15%	0.03	20%	0.04	35%	0.05	30%	0.07			
1.2	Development, modification and application of appropriate statistical methods for agronomic, socio-economic and industrial experiments in the rubber sector	No. of applications/ modifications/applications of statistical methods	NA		CF	No. of developments/modifications/applications and subsequent publications	2	0.07	15	0.03	35	0.04	70	0.05	100	0.07	02 developments/modifications/applications and subsequent	Appropriate statistical methods for analyzing data derived from rubber sector research	

2. Improving the knowledge base on climate, climate change & variability for better decision making in rubber growing areas (Continuous)								**0.22**		**0.02**		**0.10**		**0.06**		**0.04**			
2.1	Maintenance of databases on meteorological data in rubber growing areas	No. of databases maintained	13		CF	Databases maintained	5	0.06	20%	0.02	20%	0.02	30%	0.01	30%	0.01	05 databases maintained	Reliable information for stakeholders for better decision making	
2.2	Meteorological data analysis and modeling	No. of indicators analyzed	13			Publications	3		25%		25%		30%		20%		03 Publications	Reliable information for stakeholders for better decision making	
2.3	Improving the existing meteorological stations	No. of new equipment established	13		CF	Installing new/repaired equipment	3	0.16	0	0	50%	0.08	20%	0.05	30%	0.03	Installing new/repaired equipment	Data & information for smallholders	

Agriculture Economics Unit (Rs. Mn. 0.32)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Analysis on Socio-economic implications & sustainability issues of rubber cultivation and different policies implemented in the rubber sector								**0.208**		**0.071**		**0.049**		**0.04**		**0.048**	Generated key indicators with reports	Improve productivity of rubber land smallholder income generation	
1.1	Trend analysis of Rubber Industry	3, 12	1, 15		CF	No.	2	0.03	0.25	0.008	0.25	0.008	1.00	0.008	0.50	0.006			
1.2	Analysis of Poverty reduction through Rubber-based farming systems					No.	1	0.08	0.25	0.02	0.25	0.02	0.25	0.01	0.25	0.03			
1.3	Sustainability Analysis of Rubber Based Farming Systems					No.	1	0.09	0.25	0.04	0.25	0.02	0.25	0.02	0.25	0.01			
1.4	Analysis of rubber sector policy changes					No.	2	0.008	0.25	0.003	0.25	0.001	1.00	0.002	0.50	0.002			
2	**Programme/ Project: Rubber Industry data management and economic analysis**							**0.112**		**0.018**		**0.004**		**0.004**		**0.086**	Generated key indicators with reports	Improve productivity, profitability and income diversification of rubber lands	
2.1	Update data bases on rubber industry and economic analysis	3, 12	15		CF	No.	2	0.007	0.5	0.004	1	0.001	1.5	0.001	2	0.001			
2.2	Identification of low productive rubber lands through spatial analysis					No.	2	0.08	0.5	0.006	1	0.002	1.5	0.002	2	0.070			
2.3	Feasibility analysis of ecotourism in rubber plantation sector					No.	1	0.025	0.25	0.008	0.5	0.001	0.75	0.001	1	0.015			

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Strategic technology transfer approaches to improve the productivity of the smallholder sector								**0.46**		**0.11**		**0.23**		**0.414**		**0.46**		Improved adoption of recommended technologies in smallholder sector	
1.1	Rehabilitation of rubber holdings	11,12, 13,14	8	5	CF	Holdings	100		25		25		25		25		100 rehabilitated rubber holdings		
1.2	Rehabilitation of processing centers	11,12, 13,14	8	5	CF	Centers	20		5		5		5		5		20 rehabilitated rubber processing centers		
1.3	Establishment of demonstration plots Rain Guards	11,12, 13,14	8	5	CF	Holdings	20		20		0		0		0		20 demonstration plots Rain Guards		

1.4	Establishment of demonstration plots Inter Crop	11,12, 13,14	8	5	CF	Holdings	20		0		10		0		10		20 demonstration plots Inter Crop	
1.5	Establishment of new processing centers and SS drying system	11,12, 13,14	8	5	CF	Centers	10		2		2		4		2		10 new processing centers	
2. Programme/ Project: Transfer of technologies developed by the RRISL to improve the productivity of estate sector																		Improved adoption of recommended technologies in estates
2.1	Establishment of model clearings	11,12, 13	8	1,4	CF	Model clearings	2		0		1		0		1		2 Model clearings	
2.1	Establishment of demonstration plots - Rain guard	11,12, 13	8	1,4	CF	Demonst ration plots	2		0		1		0		1		2 demonstration plots - Rain guard	
2.2	Establishment of demonstration plots - Intercrop)	11,12, 13	8	1,4	CF	Demonst ration plots	2		0		1		0		1		2 demonstration plots - Intercrop	

3. Programme/ Project: Request based advisory visits																		
3.1	Important issues identified - estates	4,10, 11,12, 13,14	8	1,4	CF	Advisory visits	40		10		10		10		10		40 Advisory visits	Improve the productivity
3.2	Important issues identified - smallholdings	4,10, 11,12, 13,14	8	5	CF	Advisory visits	100		25		25		25		25		100 Advisory visits	
3.3	Group advisory for selected - estates	4,10, 11,12, 13,14	8	1,4	CF	Advisory visits	2		1		0		1		0		2 Estates	
3.4	Group advisory for selected - smallholdings	4,10, 11,12, 13,14	8	5	CF	Advisory visits	100		25		25		25		25		100 smallholdings/ processing	
4. Programme/ Project: Human resource development of all stake holders of the rubber sector																		
4.1	Upgrading of knowledge & skill development on rubber farming aspects (agronomic, tapping, rubber processing and marketing) - smallholder sector	4,11, 12,13, 14	8	5	CF	Smallholders	200		50		50		50		50		200 smallholders	Improved knowledge and skill level of rubber farming

4.2	Upgrading of knowledge & skill development on rubber farming aspects (agronomic, tapping, rubber processing and marketing) - estate sector	4,11, 12,13, 14	8	1,4	CF	Staff of estates	200		50		50		50		50		200 staff of estates	
4.3	Introduce of new harvesters (smallholder and estate sectors)	4,11, 12,13, 14	8	1,4	CF	New harvesters	200		50		50		50		50		200 new harvesters	Skill development new harvesters
4.3	Introduction of youth as Para extension service providers	4,11, 12,13, 14	8	1,4	CF	Youths (village and estate)	40		20		0		20		0		40 para extension service providers	Development of youth as a workforce for the rubber sector
5. Programme/ Project: Development of effective extension network in the rubber sector																		Improved awareness and productivity improvement of rubber farming
5.1	Establishment of Rubber technology transfer centers	4,11, 12,13, 14	8	1,4, 5,9	CF	Rubber technology transfer centers	2		0		0		0		2		Establishment of two Rubber technology transfer	
5.2	Establishment of Rubber techno park	4,11, 12,13, 14	8	1,4, 5,9	CF	Techno park	1		0		0		0		1		Establishment of Rubber techno park	

	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Technical assistance on manufacture of value added products								**0.78**		**0.17**		**0.21**		**0.25**		**0.15**	150 entrepre-neurs / industries benefitted	Increased promotion of manufacture of value added products	
1.1	Conducting training programs for individual / small groups of entrepreneurs / rubber small holders at RRISL, Ratmalana	4	G 12	9	CF	Entrepreneurs	30	0.15	6	0.02	8	0.04	9	0.06	7	0.03			
1.2	Conducting training programs for large groups of entrepreneurs / rubber small holders in rubber growing areas					Entrepre-neurs	75	0.20	15	0.04	20	0.06	25	0.07	15	0.03			
1.3	Providing assistance to industries on development of rubber compounds / products and trouble shooting					Compounds/ products/ trouble shootings	15	0.28	3	0.07	4	0.07	5	0.08	3	0.06			
1.4	Testing of raw rubber, rubber compounds and products at the request of the industry					Tests	550	0.15	130	0.04	140	0.04	150	0.04	130	0.03			
2. Programme/ Project: Development of new rubber products								**1.10**		**0.25**		**0.35**		**0.30**		**0.20**	8 new rubber products	An increase in the number of rubber	
2.1	Rubber composites with nano materials		G 12	9	CF	Composites	2	0.40	0	0.1	0	0.15	1	0.1	1	0.05			

2.2	Natural rubber latex foam with special properties					Products	2	0.20	0	0.05	1	0.05	0	0.05	1	0.05			
2.3	Rubber composites with green materials					Composites	2	0.30	0	0.05	1	0.1	0	0.1	1	0.05			
2.4	Rubber composites for bio-medical components					Composites	2	0.20	0	0.05	1	0.05	0	0.05	1	0.05			
3. Programme/ Project: Development of novel rubber products for local and foreign markets								**0.60**		**0.11**		**0.18**		**0.18**		**0.13**	2 novel rubber products	An increase in the foreign exchange	
3.1	Latex based novel rubber products		G 12	9	CF	Products	1	0.20	0	0.04	0	0.06	0	0.06	1	0.04			
3.2	Dry rubber based novel rubber products					Products	1	0.40	0	0.07	0	0.12	0	0.12	1	0.09			

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: To value add polymers through the modification of polymer structure and matrix								**1.44**		**0.45**		**0.35**		**0.34**		**0.30**			
1.1	Development of a nitrosamine safe accelerator system for sulfur vulcanization of dry rubber compounds- Stage II		12	8	CF	Systems	2	0.54	25%	0.15	25%	0.15	25%	0.14	25%	0.10	Value added raw materials and polymers	Sustainable rubber industry	
1.2	Study of rubber-filler interactions in silica incorporated polymer nanocomposites systems					systems	1	0.45	25%	0.15	25%	0.10	25%	0.10	25%	0.10			
1.3	Peroxide vulcanization in the presence of multi-armed PEG crosslinks					systems	1	0.45	25%	0.15	25%	0.10	25%	0.10	25%	0.10			
2. Programme/ Project: Client assistant programs (on request)								**0.55**		**0.14**		**0.14**		**0.14**		**0.13**			
2.1	Troubleshooting, testing services and training programs		12	9	CF	Services/ reports	400	0.55	100	0.14	100	0.14	100	0.14	100	0.13	Client assistant programs and testing services	Foreign exchange savings	

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Raw Rubber Processing Development & Chemical Engineering Department (Rs. Mn. 1.50)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1	**Programme/ Project: Improvement of Raw rubber processing practices**							**1.10**		**0.413**		**0.312**		**0.263**		**0.112**	New/revised recommendations	Quality enhanced raw rubber, improved profitability in manufacture of raw rubber	
1.1	Trials of Swift set type smoke houses	8, 11	9	8	GF	No.	5	0.30	25%	0.200	25%	0.050	25%	0.050	-				
1.2	Introduction of novel and efficient raw rubber processing practices					No.	2	0.25	25%	0.063	25%	0.062	25%	0.063	25%	0.062			
1.3	Development of mobile app for raw rubber processing					No.	1	0.30	25%	0.100	25%	0.100	50%	0.100	-	-			
1.4	Execution of Client requested research projects					No.	5	0.25	25%	0.050	25%	0.100	25%	0.050	25%	0.050			
2	**Programme/ Project: Trouble shooting, testing and technology transfer activities**							**0.40**		**0.10**		**0.10**		**0.10**		**0.10**			
2.1	Experiments focused on trouble shooting	9, 11, 12	9	8		No.	12	0.10	25%	0.025	50%	0.025	100%	0.025	100%	0.025	recommendations for preventing	marketable raw rubber	
2.2	Providing testing services					No.	120	0.20	25%	0.050	50%	0.050	75%	0.050	100%	0.050			
2.3	Technology transfer activities					No.	100	0.10	20%	0.025	50%	0.025	75%	0.025	100%	0.025			

Raw Rubber & Chemicals Analysis Department (Rs. Mn. 1.66)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
									Q1		Q2		Q3		Q4				
						Unit	No.		P	F	P	F	P	F	P	F			
1.Client assistance services								**1.00**		**0.20**		**0.20**		**0.5**		**0.1**	Production of quality rubber	Increase foreign income	
1.1	Issuing quality certificates for all forms of dry rubber, field latex, Centrifuged latex and Rubber processing chemicals.(600)	9	9		CF	Number of samples	600	1.00	100	0.20	200	0.20	100	0.50	200	0.10			
1.2	Sampling , inspection services and troubleshooting activities (05)					No of visits	5		1		2		2		-				
1.3	Conducting Training programs (05)					No. of training programmes	5		1		2		2		1				
2.Quality assurance and quality improvement of raw rubber & rubber processing chemicals								**0.66**		**0.20**		**0.20**		**0.20**		**0.06**	Introduce accurate test methods/Introduce good quality	Increased rubber productivity	
2.1	Identification of fast & accurate test method to determine dry rubber content in field latex					New technique01	1	0.66	25%	0.20	25%	0.20	25%	0.20	25%	0.06			
2.2	Clone recommendation based on raw rubber &physical properties/					No of clones	8		25%		25%		25%		25%				
2.3	Miscellaneous projects based on trouble shooting						5		25%		25%		25%		25%				

MPI Projects

Soils & Plant Nutrition Department (2021 – 2023)

Establishment of environmental friendly, economically viable slow release fertilizer technique to improve crop performance and establishment of accredited laboratory to supply good service to the rubber industry (Rs. Mn. 15.38)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Establishment of environmental friendly, economically viable slow release fertilizer technique to improve crop performance and establishment of accredited laboratory to supply good service to the rubber industry								**15.38**		**1.902**		**3.454**		**5.002**		**5.022**	1)Implementation of environmental friendly new technologies 2)Proper establishment of recommended agro management practices 3)Technology transfer to the stakeholders	1. Early opening for tapping, enhance the profit margins of the growers by providing them economic sustenance for their livelihood. 2. Enhance fertilizer use efficiency.	
1.1	Preparation of encapsulated ECB &RPT	5,6	2.3, 2.4. 15.3	1	CF	No.	ECB,(16,000), RPT (26000)	1.55	25%	0.387	25%	0.387	25%	0.387	25%	0.389			
1.2	Reestablishment of ECB & RPT					No.	ECB(10000)	1.67	25%	0.417	25%	0.417	25%	0.417	25%	0.419			
1.3	Purchasing of the instrument					No.	3(Water Distillation unit, Analytical Balance, pH meter)	4.12	10%	0.412	30%	1.236	30%	1.236	30%	1.236			
1.4	Collection of growth parameters; soil & plant sample collection					No.	Leaf 100, Soil 100	0.62	0%	0	0%	0	50%	0.31	50%	0.31			

1.5	Physical and Chemical analysis of Soils samples and nutrient analysis of plant samples	5,6	2.3, 2.4. 15.3	1	CF	No.	parameters 1000	0.42	0%	0	0%	0	50%	0.21	50%	0.21	4)Required nutrients and their correct ratios will be received to the plants at correct time 5)Increase access to get high Standard analytical reports	3.Reduces consequent negative repercussions in the environment. 4. Reduce labour cost associated with fertilizer application under immature phase. 5.Confidence of the analytical reports	
1.6	Conducting training programme					No.	5	0.07	0%	0	30%	0.021	30%	0.021	40%	0.028			
1.7	Preparation of leaflets					No.	2	0.07	0%	0	30%	0.021	30%	0.021	40%	0.028			
1.8	Design, implementation, maintenance and improvement of the quality management system of the laboratory					No.	1	1.37	10%	0.137	20%	0.274	35%	0.479	35%	0.480			
1.9	Enhance laboratory facilities up to laboratory accreditation international standard ISO/IEC 17025					No.	6 Parameters (to be accredited)	5.49	10%	0.549	20%	1.098	35%	1.921	35%	1.922			

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Genetics & Plant Breeding Department (2021 – 2024)

Screening of drought /stress tolerant Hevea clones for sustainable Rubber cultivation in marginal areas (Rs. Mn. 4.74)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1.Screening of drought /stress tolerant Hevea clones for sustainable Rubber cultivation in marginal areas								**4.74**		**0.585**		**1.635**		**1.03**		**1.49**			
1.1	Preparation of plants for screening and field establishment	2	12		CF	No.	10	0.01	1	-	2	-	2	0.01	5	-	Prepare 10 clones for molecular screening and establish 4 clones for field screening	Confirm the Molecular screening	
1.2	Complete the existing Molecular laboratory facilitation process					Level of completion	100	2.04	10%	0	40%	1.02	100%	1.02	-	-	Complete and Improve the infrastructure facilities and equipped the molecular Laboratory	Provide good & healthy working	
1.3	Molecular screening					No.	10	2.69	2	0.585	2	0.615	-	-	6	1.49	Screening of ten clones for 10 genes	Select clones which indicate high	

Raw Rubber & Chemicals Analysis Department (2021 – 2022)

Establishment of accredited laboratory and enhancement of testing facilities for rubber industry in Sri Lanka (Rs. Mn.19.23)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
									Q1		Q2		Q3		Q4				
						Unit	No.		P	F	P	F	P	F	P	F			
1. Programme/ Project: Establishment of accredited laboratory and enhancement of testing facilities for rubber industry in Sri Lanka								**19.23**		**0.17**		**0.735**		**17.225**		**1.10**	Establishment of accredited laboratory and producing accredited test reports	Increase rubber export income/Enhancement of testing facilities/industry collaborative research projects	Continued project from 2021
1.1	Submission of accreditation request application to SLAB	9	9		CF	No.	%	0.40	10%	0.10	30%	0.100	70%	0.10	100%	0.10			
1.2	Establishment of chemical storage facilities and expired chemical disposal facilities of the laboratory					No.	%	1.55	20%	0.01	50%	0.500	80%	1.00	100%	0.04			
1.3	Purchase of equipments, measurement standards, reference materials, reagents and consumables					No.	%	16.92	20%	0	50%	0.020	80%	16.0	100%	0.90			
1.4	Calibration and verification of measuring equipments					No.	%	0.20	20%	0.05	60%	0.050	80%	0.05	100%	0.05			
1.5	Training of laboratory personnel to be competent and work accordance with laboratory management system					No.	%	0.05	10%	0.01	30%	0.010	80%	0.02	100%	0.01			
1.6	Conducting Internal and external audits					No.	%	0.01	10%	0	30%	0.005	80%	0.005	100%	0			
1.7	Conducting ILC(interlaboratory comparison) and PT (proficiency testing) programmes					No.	%	0.10	10%	0	30%	0.050	80%	0.05	100%	0			

Raw Rubber Processing Development & Engineering Department (2021 – 2022)
Monitoring and optimizing the performance of rubber effluent treatment plants in Sri Lanka to improve the treatment efficiency and ensure (Rs. Mn. 11.28)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1.Programme/ Project: Monitoring and optimizing the performance of rubber effluent treatment plants in Sri Lanka to improve the treatment efficiency and ensure								**11.28**		**2.575**		**3.300**		**4.850**		**0.555**	1. Accepted laboratory for effluent water quality testing 2.Cost effective effluent treatment for small holders	1.Internationally accepted waste water quality certificate 2.User friendly and environmentally safe disposal rubber waste water	
1.1	Improvement of in frastructure facilities	2, 11, 12	3, 8, 9	8	GF	No.	1	1.50	25%	0	100%	1.50	-	-	-	-			
1.2	Purchase of Scientific Equipment and accessories					No.	12	7.30	25%	2.00	50%	1.00	100%	4.30	-	-			
1.3	Services of research assistant					No.	1	0.48	25%	0.125	50%	0.15	75%	0.10	100%	0.105			
1.4	Consultancy services					No.	1	0.50	20%	0.10	50%	0.15	75%	0.125	100%	0.125			
1.5	Training officers					No.	4	0.50	25%	0.10	50%	0.15	75%	0.125	100%	0.125			
1.6	Construction of pilot scale treatment plants					No.	10	1.00	20%	0.25	40%	0.35	80%	0.20	100%	0.20			

Plant Pathology & Micro Biology Department (2021 – 2025)

Studies on the biology and epidemiology of the Pestalotiopsis Leaf fall disease and to develop effective management strategies

Plant Pathology & Microbiology Department (Rs. Mn. 9.37)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Studies on the biology and epidemiology of the Pestalotiopsis Leaf fall disease and to develop effective management strategies Plant Pathology & Microbiology Department								**9.37**		**1.45**		**4.65**		**1.85**		**1.42**	No of pathogens identified. Publications on new knowledge. Effective methods to destroy the grownd inoculum. Identification of effective pesticide to control the disease. No of training programmes	Identification of the new pathogens, gaining the knowledge on their life cycles and application of the gained knowledge to formulate effective management strategies.	
1.1	Studies on the morphological features of the pathogen population and DNA Sequencing	2	15	7	CF	path isolates	100	**1.97**	25%	0.40	50%	1.00	75%	0.40	100%	0.17			
1.2	Studies on the physiological features of the pathogen population					path isolates	6	**1.00**	25%	0.25	50%	0.25	75%	0.25	100%	0.25			

1.3	Rehabilitation of the chemical stores and storage cupboards of the department to facilitate the research programme	2	15	7	CF	chemical stores	1	**0.80**	25%	0.00	50%	0.40	75%	0.40	100%	0.00	No of pathogens identified. Publications on new knowledge. Effective methods to destroy the grownd inoculum. Identification of effective pesticide to control the disease. No of training programmes	Identification of the new pathogens, gaining the knowledge on their life cycles and application of the gained knowledge to formulate effective management strategies.	
1.4	Studies on the reproductive features of the pathogen population					path isolates	6	**1.00**	25%	0.10	50%	0.80	75%	0.10	100%	0.00			
1.5	Chemical treatments for the management ground debris for RPCs					No of treatments	3	**1.10**	25%	0.20	50%	0.20	75%	0.20	100%	0.50			
1.6	Chemical controlling of the pathogen, drones service and preparation of training materials					Ha.	400	**3.50**	25%	0.50	50%	2.00	75%	0.50	100%	0.50			

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TREASURY APPROVED PROJECTS IN OPERATION

(TO BE CONTINUED; FUNDING FROM MINISTRY RESPECTED)

Plant Pathology & Micro Biology Department (2018 – 2022)

Improvement of strategies to Combat White Root Disease in rubber plantation (Rs. Mn. 6.69)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Improvement of strategies to Combat White Root Disease in rubber plantation (23 / 1 / 17)								**6.69**		**-**		**3.30**		**2.25**		**1.14**	Demonstration plots 100	Improvement of the productivity on the rubber plantation through effective management of white root disease	
1.1	Establishment of demonstration plots to demonstrate the effectiveness and the applicability of the new research findings	5	G2	1	CF	demonstration plots	20	**3.30**	-	-	8	2.00	8	1.00	4	0.30			
1.2	Rehabilitation of abandoned white root disease patches to maintain the national agricultural lands.					WRD patches	10	**1.40**	3	-	2	0.55	2	0.48	3	0.37			
1.3	Economic analysis to assess the economic impact of the WRD of rubber and its management					Publications	1	**0.19**	-	-	0	0.05	0	0.07	1	0.07			
1.4	Preparation of the Final Report, Publication, Video clips					Leaflets Video clips	1 5	**0.80**	-	-	0	0.20	1	0.30	5	0.30			
1.5	Seminar to disseminate the knowledge					seminar Training Programmes	1 6	**1.00**	-	-	2	0.50	2	0.40	3	0.10			

Bio Chemistry & Physiology Department (2018 – 2022)
Effective introduction of low intensity harvesting systems to rubber growers of Sri Lanka (Rs. Mn. 18.52)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
									Q1		Q2		Q3		Q4				
						Unit	No.		P	F	P	F	P	F	P	F			
1. Programme/ Project: Effective introduction of low intensity harvesting systems to rubber growers of Sri Lanka								**18.52**		**-**		**2.82**		**4.70**		**11.00**	Development of 3 new LIH systems. Adoption of 500ha. Training 300 growers. Providing latex diagnosis facilities.	Reduce cost of production. Increase economical lifespan of plantations. Reduce labour scariest.	
1.1	Investigations on 3 new low intensity harvesting for rubber growers	4		8	CF	Development	%	1.50	-	-	25%	0.40	35%	0.50	40%	0.70			
1.2	Introduction of LIH systems to smallholders & RPCs in Southern, Uva and Sabaragamuwa provinces					Ha.	500	1.50	-	-	125	0.40	175	0.50	200	0.60			
1.3	Providing latex diagnosis facilities to growers -Phase IV					Development	%	13.52	-	-	25%	1.52	35%	3.00	40%	9.00			
1.4	Public awareness programmes for growers.					Growers	300	2.00	-	-	75	0.50	100	0.70	125	0.70			

Adaptive Research Unit (2018 – 2023)

Developing a project to approach the Voluntary Carbon Market with the rubber cultivation in Eastern and Uva provinces for sustainable rubber industry (Rs. Mn. 5.00)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1.Developing a project to approach the Voluntary Carbon Market with the rubber cultivation in Eastern and Uva provinces for sustainable rubber industry								**5.00**		**0.00**		**1.40**		**1.00**		**2.60**			
1.1	Maintenance of monitoring plots (Present level 0%)					No. of monitoring plots	43	1.25	25%	_	50%	0.50	75%	0.50	100%	0.25	Growth data of sample plots available	Monetary benefits obtained for environmental services of rubber cultivation by issuing Verified Carbon Standards & declaration of rubber related government organizations carbon neutral	
1.2	Project validation/verification by an accredited body (Present level 70%)		13		CF	Level of verification	85%	2.75	70%	_	75%	0.30	80%	0.30	85%	2.15	Validation/verification of carbon credits		

1.3	Institutional GHG validation/verification (Present level 85%)		13		CF	No. of organizations	4	0.50	85%	_	90%	0.30	95%	0.10	100%	0.10	Validation/verification of GHG inventory of rubber related government organizations	Monetary benefits obtained for environmental services of rubber cultivation by issuing Verified Carbon Standards & declaration of rubber related government organizations carbon neutral	
1.4	Promoting project outputs (Present level 20%)					No. of awareness programmes	4	0.50	20%	_	40%	0.30	50%	0.10	60%	0.10	Stakeholders educated on carbon neutral policy & carbon credits		

Newly proposed projects (to be approved)

Raw Rubber Processing Development & Engineering Department
Modernization of raw rubber manufacturing process (Rs. Mn.4.0)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
									Q1		Q2		Q3		Q4				
						Unit	No.		P	F	P	F	P	F	P	F			
1.Programme/ Project: Modernization of raw rubber manufacturing process								**4.0**		**-**		**3**		**0.50**		**0.50**	Semi-mechanized raw rubber processing units	reduced labour independent raw rubber processing operations	
1.1	Design, fabrication and installation of semi-mechanized latex/coagulum feeding unit	8, 11	8, 9	6	GF	No	1	1.5	25%	-	50%	1	80%	0.25	100%	0.25			
1.2	Design, construction and evaluation of smart drying system for raw rubber with shortened drying period					No	1	2.5	25%	-	50%	2	80%	0.25	100%	0.25			

Biometry Section

Establishing a laboratory for facilitating spatial data management approaches through Geographical Information System- Project Acronym (SDMGIS) (Rs. Mn. 15.08)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1.Establishing a laboratory for facilitating spatial data management approaches through Geographical Information System- Project Acronym (SDMGIS)								**15.08**		**0.50**		**2.377**		**8.623**		**3.58**			
1.1	Initial project preparation	6* 1,4 **	15		CF	% completion of ICT infrastructure		0.2	50%	0.1	75%	0.05	100%	0.05	-	-	Basic infrastructure of the project including displays, Storage facilities	Land use optimization and conservation of environment through information management	
1.2	Consultative committee meetings with foreign and local experts					No. of meetings	6	1.3	25%	0.4	50%	0.3	75%	0.3	100%	0.30	Working plan and knowledge on handling training and awareness programmes		

1.3	Maintenance of License and operational services					No. of software maintained	3	1.00	0	0	0	0	0	0	25%	1.00	License & services of the equipment. Training on Awareness of use of GIS technology, Training on use of GIS mapping, Mapping of requested lands with trainees. Training and awareness start from the second year and first year target is 150. Thereafter 300 persons per year. Cumulative target for 4 years is 750.		
1.4	Purchase of Equipment including Multispectral Drone, handheld GPS, Desktop Computers with accessories, other miscellaneous items					No. of equipment purchased	21	12.08	0	0	25%	2.027	75%	8.023	100%	2.03	Establishing GIS infrastructure facilities including Hand held GPS, Multispectral Drones, Computer equipments for data analysis		
1.5	Training for project officers on handling GPS & Drones					No. of officers trained	10	0.5	0	0	0	0	50%	0.25	100%	0.25	Trained personnel equipped with GIS lab equipments		

Plant Science Department

Introducing micro-irrigation scheduling together with growth regulators to increase the productivity of rubber nurseries and immature rubber plantings under drought conditions in Sri Lanka (Rs. Mn. 22.38)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Programme/ Project: Introducing micro-irrigation scheduling together with growth regulators to increase the productivity of rubber nurseries and immature rubber plantings under drought conditions in Sri Lanka								**22.38**		**4.90**		**6.01**		**6.91**		**5.28**	Production of quality planting material under nursery condition in the Intermediate zone and increase new rubber cultivations. Find suitable lands for new cultivation	Increase new cultivation by 600 Ha in the Intermediate zone	
1.1	Land selection, land suitability and risk assessments	6	11	8	CF	Ha.	9	0.1	50%	0.05	50%	0.05	-	-	-	-			
1.2	Install three sprinkler irrigation systems at selected nurseries.					Ha.	600	6.6	25%	1.65	25%	1.65	25%	1.65	25%	1.65	Increase irrigation water-use efficiency with irrigation scheduling		
1.3	To install nine micro-irrigation systems at newly established rubber smallholdings.					Ha.	9	4.27	25%	1.07	25%	1.07	25%	1.07	25%	1.07	Maintaining 100% plant establishment rate with micro-irrigation		

1.4	Establish three 2-ha rubber nurseries at selected three Districts.					Ha.	600	6.81	20%	1.36	30%	2.04	30%	2.04	20%	1.36	Increase planting material production up to 90%	
1.5	Establish nine new rubber small holdings each comprising 1 ha of lands in selected three Districts.					Ha.	9	1.05	25%	0.27	25%	0.26	25%	0.26	25%	0.26	Increase the cultivable lands in selected three districts	
1.6	Purchasing of equipment and farm tools							2.00	25%	0.5	25%	0.5	25%	0.5	25%	0.5	Assessing plant growth, morphological and physiological attributes.	
1.7	Monthly application of Salicylic acid (SA) and Nitric oxide (NO) together with micro-irrigation under nursery conditions.					Ha.	6	1.55	0%	0	10%	0.44	25%	0.67	10%	0.44	Alleviating drought stress of nursery plants and minimizing net irrigation requirement under drought conditions.	

Soils & Plant Nutrition Department

Introduction of different organic packages among small holdings and estate sector rubber growers and preparation of low cost bioorganic product (Rs.Mn.35.37)

No	Activity	KPIs No. *	SDG No.	Special Priority No. **	Funding Source (CF/GF)	Total Physical Target		Annual Allocation 2022 (Rs. Mn.)	Annual Target								Expected Output	Expected Outcome	Remarks
						Unit	No.		Q1		Q2		Q3		Q4					
									P	F	P	F	P	F	P	F			
1. Introduction of different organic packages among small holdings and estate sector rubber growers and preparation of low cost bioorganic product								**35.37**											
1.1	Isolation of microbes and identification of suitable organic material for bioorganic product preparation					Rubber plantation	*1000 Rubber Small holders, *4000 Oil palm plantation *4 Tea plantation, *15 University students, *3-5 annually		25%	0.125	25%	0.125	25%	0.125	25%	0.125			
1.2	Site selection and establishment of trial								20%	0.903	35%	1.58	35%	1.58	10%	0.452			
1.3	Purchase inorganic fertilizers, liquid organic & biofertilizer								25%	0.3975	25%	0.3975	25%	0.3975	25%	0.3975			
1.4	Preparation of encapsulated coir bricks (ECB)								25%	0.175	25%	0.175	25%	0.175	25%	0.175			
1.5	Preparation of reusable porous tube (RPT)								25%	0.8425	25%	0.8425	25%	0.8425	25%	0.8425			

1.6	Preparation of learning materials, exhibits and banners								0%	0	30%	0.405	30%	0.405	40%	0.405		
1.7	Organizing and conducting awareness programmes/workshops								0%	0	30%	0.3225	30%	0.3225	40%	0.43		
1.8	Field visits/advisory visits for demonstration plots								25%	0.106	25%	0.106	25%	0.106	25%	0.107		
1.9	Collection of growth parameters; soil & plant sample collection								0%	0	0%	0	50%	0.2125	50%	0.2125		
1.10	Physical and Chemical analysis of Soils samples and nutrient analysis of plant samples								0%	0	0%	0	50%	0.1	50%	0.1		
1.11	Purchase of instruments								25%	0.456	25%	0.456	25%	0.456	25%	0.457		

RUBBER RESEARCH INSTITUTE OF SRI LANKA
Treasury Allocations Requirements for the January to Dec 2022

Month	Recurrent Rs. Million 400.00			Capital RS. Million 30.00			Total Recurrent and Capital Allocation
	Salaries	Other Recurrent	Total	Research	Other Assets	Total	Rs. Million
January	29.16	4.16	33.32	2.16		2.16	35.48
February	29.16	4.16	33.32	2.16		2.16	35.48
March	29.16	4.16	33.32	2.16		2.16	35.48
April	29.16	4.16	33.32	2.16		2.16	35.48
May	29.16	4.16	33.32	2.16	1.50	3.66	36.98
June	29.16	4.16	33.32	2.16	2.50	4.66	37.98
July	29.16	4.16	33.32	2.16		2.16	35.48
August	29.16	4.16	33.32	2.16		2.16	35.48
September	29.16	4.16	33.32	2.16		2.16	35.48
October	29.16	4.16	33.32	2.16		2.16	35.48
November	29.16	4.16	33.32	2.16		2.16	35.48
December	29.24	4.24	33.48	2.24		2.24	35.72
Total	**350.00**	**50.00**	**400.00**	**26.00**	**4.00**	**30.00**	**430.00**

Internal Audit Plan for the year 2022

Annex 6

	Ref- procurement/ action plan	Main area	Sub area	Activity	Examining method	Extent of sample from full bulk %	Examining bulk distribution			
							1st Q	2nd Q	3rd Q	4th Q
1		Re current Expenditure- Accounts division	Payment vouchers Value Rs.< 0.05m	Checking- ▪ Approval Authorization & certification ▪ Arithmetical & Calculation error ▪ Validity & applicability ▪ Are true and correct information being revealed? ▪ Segregation of the work	Sample test checking	20	5%	5%	5%	5%
			Any other special payment which was arisen special matter	Accuracy (including above method of using for voucher checking)	Full amount	100%	100%	100%	100%	100%
2		**Capital Expenditure**	**Assets acquisition** ▪ Lands Building and vehicles		Full amount	100%	0	0	0	100%
				< 1m – 0.1>m	Sample test check	80%	0	0	40%	40%
				<0.1m- 0.05>m	Sample test check	50%		25%	25%	
			Estate- Re-planting expenses	▪ Are true and correct information being revealed?	Sample test checking	10%	0	10%	0	0

		Work section	**Assets repairing-** 1.vehicle repairing- **internal repairing** **outsource repair :** **2.Buildings construction**	Approval & Authorization Applicability and Supervision of the work **repair**	Sample test check	10%	0	5%	5%	0
					Full amount	100%	0	0	0	100%
				Same above						
3			**<u>Accounts division</u>** • Sundry income	**Debtors - (**checking record maintaining and accuracy	Sample test check	10%	0	0	10%	0
				Obsolete stock sale - (checking record maintaining and accuracy	Full amount	100%	0	0	100%	0
4		Operational activities	Estate- ▪ Productivity	checking record maintaining and accuracy	Sample test check	10%	0	10%	0	0
			▪ **Special Project under conduct by grants at the estate division**	Expectation and achievement	Full amount	100%	0	0	0	100%
5		Operational activities	Research division – [tech and bio]	Routine work - checking record maintaining	Sample test checking	10%	5%	5%	0	100%
				Research findings – like that carbon market project activities	Sample test checking	10%	0	10%	0	0
6			Administrative dept.	Salary increment's – preparation, checking, Authorizing, Segregation of the work Fill maintaining etc.	Sample test checking	5%	2%		3%	0
7		Pre- audit	Gratuity payments-	Accuracy checking	Full amount	100%	100%	100%	100%	100%
			Inquire handling	According to examining with Establishment cord - 2 para	Full amount	100%	100%	100%	100%	100%
			Tree uprooting	Physically verify	Full amount	100%	100%	100%	100%	100%