

ANNUAL REPORT 2020



**POSTGRADUATE INSTITUTE OF SCIENCE
UNIVERSITY OF PERADENIYA**

Vision

To be an internationally renowned centre of excellence in Asia for
Postgraduate education and research in Science.

Mission

To contribute to the development of a knowledge – based society
with social sensitivity, ethical rectitude and economic prosperity
through postgraduate level education and research in science and
dissemination of knowledge in an intellectually stimulating,
efficiently managed and harmonious academic environment.

DIRECTOR'S REVIEW



MESSAGE FROM THE DIRECTOR

The Postgraduate Institute of Science (PGIS), University of Peradeniya, established in 1996 by an ordinance from the Ministry of Higher Education, is an institution for postgraduate education and research in scientific disciplines in Sri Lanka. It has successfully expanded over the years to conduct several MSc, MPhil and PhD programs as well as postgraduate diploma and certificate courses under 11 Boards of Study with the participation of a large number of postgraduate students from different Universities in Sri Lanka and abroad. The principal objective of the Postgraduate Institute of Science is to promote and provide postgraduate instruction, training and research in various scientific specialties, enhancing the graduate academic experience.

Being situated in the premises of University of Peradeniya, it provides an ideal environment for intellectual activities particularly in interdisciplinary areas. PGIS has the opportunity of obtaining services from academic staff members with postgraduate qualifications from some of the best Universities in the world. The members of the teaching panels are drawn from nine Faculties of the University of Peradeniya, as well as from other Universities and Institutes. The excellent research facilities available at the Faculty of Science and other Faculties of the University of Peradeniya and research Institutions in the country are used to provide research training to students. PGIS conduct in-service training programmes, short courses, outreach programmes and workshops. The Institute also offers consultancy services to local industry and public/private sector institutions. The PGIS indeed plays a unique and leading role among the other Institutes of Sri Lanka. The Institute continues to develop leaders in the fields of science and provides for the betterment of society through its research, focusing on solutions to national and international issues. The long-term goal of the PGIS is to become a leading Institute in science and technology in the South Asia.

The PGIS caters to the growing demand of manpower of the field “Science and Technology “by facilitating through resources strategic collaborations with professional bodies, commercial organizations, research organizations, government bodies, other universities and public and private sector organizations in Sri Lanka. The quality of the postgraduate degree programmes has been maintained at a high standard in order to attract a large number of postgraduate students locally as well from other countries in the

region, during the past decade. Over this period, student enrollment has been increased at a greater rate at PGIS. A significant number of postgraduates are providing their expertise to the national development while being associated in both private and public sectors. The PGIS has become the leading postgraduate degree awarding Institute in Sri Lanka. During the past 24 years the PGIS awarded than 2750 postgraduate degrees (Ph.D., M.Phil. and M.Sc.) in different disciplines of science and more than 17,000 have participated in workshops, conferences and short-term training courses/programmes. Due to pandemic situation in the country most of prescheduled workshops could not be conducted but adhering to the covid-19 prevention guild lines in virtual platform several national and international conference/workshops were conducted in year 2020.

In keeping with the vision and mission of the PGIS, activities have been planned in the corporate plan for the next 3 years. During this period, we will focus on improving the postgraduate education strengthening the long-term connections and relationships with other related Institutes of Sri Lanka and creating international opportunities and connections for our students. By providing modern learning prospects, we will prepare our students for multiple future careers, while teaching them to think critically, excel in their chosen disciplines and grasp the importance of continuing to learn over their lives. We need to produce students who are responsible citizens and leaders with practical knowledge, creativity and understanding of national requirements. Our strengths in developing future postgraduate programmes, increasing student intake and promoting innovative research have been taken into account in preparing the corporate plan. A sophisticate Management Information System for efficient administration and for the improvement of the quality of our students was initiated recent past. The PGIS is planning to expand its activities with the opening of the new building and looking forward for productive future ahead. Further, the PGIS is initiating strategies for catering the requirements of the industry.

Prof. H. M. T.G.A. Pitawala

Director, PGIS

15/02/2021

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1. BRIEF INTRODUCTION



The Postgraduate Institute of Science (PGIS) is a National Institute attached to the University of Peradeniya, Sri Lanka. Presently, approximately 2750 students are registered at the PGIS. It was established in 1996 by an ordinance from the Ministry of Higher Education in order to promote science education and research & development (R&D) in scientific disciplines in Sri Lanka. The principal objective of the Postgraduate Institute of Science is to promote and provide instructions, training and research in various scientific specialties thus enhancing the graduate academic experience.

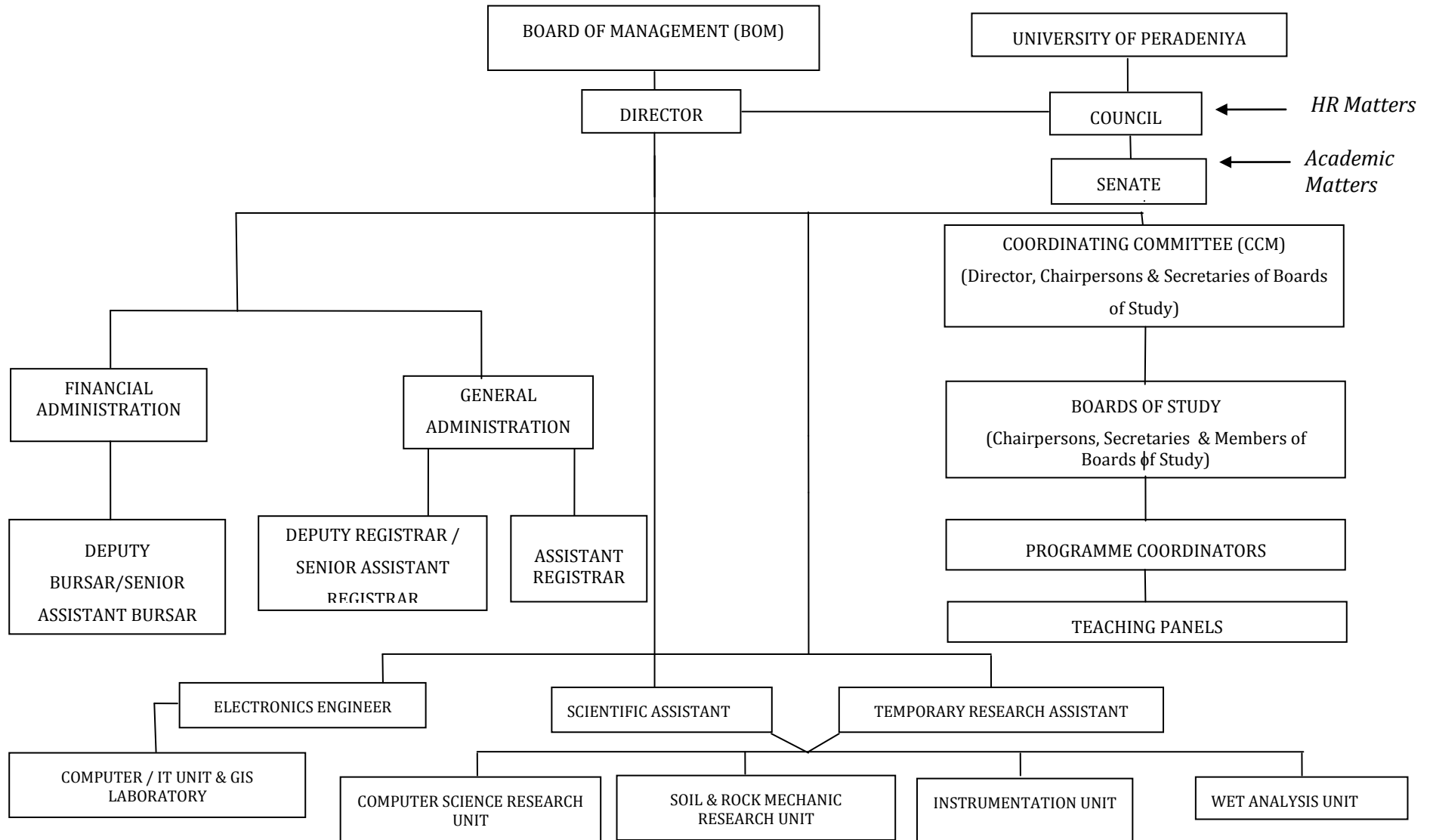
The PGIS offers Masters, M.Sc., M.Phil. and Ph.D. degree programmes as well as postgraduate diploma and certificate courses to cater to the demand in both the public and private sectors in the nation. The M.Sc., M.Phil. and Ph.D. programmes require completion of a research project while the other programmes require completion of course work only. Provisions are available to conduct research work at either in the University System or at a relevant research institution in Sri Lanka. Many research programmes of the PGIS are conducted with the collaboration of the Faculty of Science and other faculties of University of Peradeniya and other national institutes. The student population includes local and foreign graduates from different disciplines in science. In addition, structured and tailor-made training programmes, such as short courses and workshops, are also conducted frequently. Several programmes conducted by the PGIS are popular among the scientific community as well as general society. The programmes of the PGIS are conducted through 11 Boards of Study, covering all science disciplines including Science Education. The members of teaching panels are drawn from the nine Faculties of the University of Peradeniya, as well as from other Universities, Institutes and industrial sector. The Institute also offers consultancy services to local industry and public/private sector institutions. Sandwich programmes and collaborative research projects have also been launched with international institutions and state organizations. Under the ERASMUS scholarship programme, PGIS students have received scholarships to continue their studies

abroad. The PGIS conduct research conferences and symposia including the annual PGIS Research Congress, with the academic collaboration of both local and foreign participants.

The PGIS provides efficient services to its stakeholders through its dedicated and well-trained staff, and as a result, its efforts towards internationalization have become stronger during the last few years. The PGIS hopes to achieve its vision in the future by becoming one of the best Postgraduate Institutes in scientific and research in Asia.

2. ORGANIZATIONAL STRUCTURE

Organogram of the Postgraduate Institute of Science



3. BOARD OF MANAGEMENT

3.1. Ex-Officio Members

1. Prof. HMTGA Pitawala, Director, Postgraduate Institute of Science
2. Mr. GMRD Aponsu, Director (Planning), Ministry of Higher Education, 18, Ward Place, Colombo 7
3. Ms. Geetha Wimalaweera, Director General, Department of Development Finance, Ministry of Finance, Colombo
4. Mrs. KAP Perera, Director, Sri Lanka Planetarium, State Ministry of Skills Development, Vocational Education Research & Innovation
5. Director General, National Science Foundation, 47/5 Maitland Place, Colombo 07
6. Dr. SW Gamage, Secretary/Chamber of Commerce and Industry of Central Province, No.5, Mulgampala Road, Kandy
7. Prof. SR Kodituwakku, Dean/Faculty of Science, University of Peradeniya
8. Prof. RGSC Rajapakse, Chairman/BoS in Biochemistry & Molecular Biology, Department of Molecular Biology & Biotechnology
9. Prof. MMAN Navaratne, Chairperson/BoS in Biomedical Sciences, Department of Chemistry
10. Dr. WMAT Bandara, Chairperson BoS in Chemical Sciences, Department of Chemistry
11. Dr. NWB Balasooriya, Chairperson BoS in Earth Sciences, Department of Geology
12. Prof. GWAR Fernando, Chairman/BoS in Environmental Science, The Open University of Sri Lanka
13. Prof. AAI Perera, Chairman/BoS in Mathematics, Department of Mathematics
14. Dr. JP Liyanage, Chairman/BoS in Physics, Department of Physics
15. Prof. DMD Yakandawala, Chairperson/ BoS in Plant Sciences, Department of Botany
16. Prof. HMSP Madawala, Chairperson/BoS in Science Education, Department of Botany
17. Dr. UAJ Pinidiyaarachchi, Chairperson/BoS in Statistics & Computer Science, Dept of Statistics and Computer Science
18. Prof. HMTGA Pitawala (Interim Chairperson)/BoS in Zoological Sciences, Department of Zoology

3.2. UGC Nominees

19. Prof. Nimal Gunathilake, 179/1A, Eriyagama, Peradeniya
20. Prof. Prasad Jayaweera, Department of Computer Science, Faculty of Applied Sciences, University of Sri Jayawardenapura

3.3 Sub-Committees of the Board of Management

- (i) Audit & Management Committee
- (ii) Finance Committee
- (iii) Senior Management Committee
- (iv) Industrial Outreach Committee
- (v) Research & Development Committee

4. COORDINATING COMMITTEE

Members of the Coordinating Committee of the PGIS

- Prof. HMTGA Pitawala, Director/PGIS
- Prof.SR Kodituwakku, Dean, Faculty of Science
- Senior Assistant Librarian, Science Library
- Chairpersons, Secretaries and Programme Coordinators of the M.Sc Programmes (as per the table below)

	Board of Study	Chairperson	Secretary	M.Sc Programme	Programme Coordinators
1	Board of Study in Biotechnology and Molecular Biology	Prof. RGSC Rajapakse	Dr. BADH Beligala	Clinical Biochemistry	Prof. HKI Perera
					Dr.WIT Fernando
				Experimental Biotechnology	Prof. S.Ranasinghe Prof. RGSC Ranasinghe
2	Board of Study in Biomedical Sciences	Prof. MMAN Navaratne	Dr. P.Wijesinghe	----	----
3	Board of Study in Chemical Sciences	Dr. WMAT Bandara	Dr. JMS Jayasinghe	Analytical Chemistry	Prof. MMAN.Navarathne
					Dr. JATC Ariyaratne
				Industrial Chemistry	Dr. M.Danturebandara
					Dr. JMS Jayasinghe
				Nanoscience & Nanotechnology	Prof. RMG Rajapakse
					Dr. ACA Jayasundara
					Dr. BMK Pemasiri
					Dr. RGSC Rajapakse
4	Board of Study in Environmental Science	Prof. GVAR Fernando	Dr. GAN Suranjith	Environmental Science	Prof. GVAR Fernando
					Dr. GAN Suranjith
				Biodiversity Ecotourism	Prof. SK Yatigammana

				& Environmental Management	Mr. C.Wijesundara
5	Board of Study in Earth Science	Prof. NWB Balasooriya	Dr. PL Dharmapriya	Disaster Management	Prof. BSB Karunaratne
					Dr. B.Athurupana
				GIS and Remote Sensing	Dr. AAJK Gunatilake
				Gemmology & Industrial Minerals	Prof. SW Nawaratne
					Dr. PL Dharmapriya
				Engineering Geology & Hydrogeology	Dr. AAJK Gunatilake
					Prof. HA Dharmagunawardhana
				Water Resource Management	Dr. AAJK Gunatilake
					Prof. HA Dharmagunawardhana
6	Board of Study in Mathematics	Prof. AAI Perera	Dr. THKR De Silva	Industrial Mathematics	Dr. PGRS Ranasinghe
7	Board of Study in Physics	Dr. JP Liyanage	Dr. T.Ranawaka	Physics of Material	Dr. VA Seneviratne
				Medical Physics	Dr. V.Sivakumar
8	Board of Study Plant Sciences	Prf. DMD Yakandawala	Dr. SCK Rubasinghe	Medical Microbiology	Prof. F.Noordeen
					Dr. S.Athukorala
				Pharmaceutical Botany	Prof. GAD Perera
9	Board of Study Science Education	Prof. HMSP Madawala	Dr. WAD De Silva	Overall Programme Coordinators	Dr. WAD Chandrasena
				Science Education (Biological Education)	Dr.SY Ekanayake
				Science Education (Chemistry Education)	Dr. S.Athukorala
				Science Education	Dr. HAIR Perera
					Dr. AK Amarasinghe

				(Mathematics Education)	Dr. GWRMR Palamakumbura
				Science Education	Dr. TP Ranawaka
				(Physics Education)	
				Diploma in Science Education	Dr. ARGAM Abeykoon Menike
10	Board of Study in Statistics & Computer Science	Dr. UAJ Pinidiyaarachchi	Dr. SP.Abeykundara	Applied Statistics	Dr. SP Abeykundara
					Prof. YPRD Yapa
				Computer Science	Dr. RD Nawarathne
				Data Science	Dr. HTK Abeykundara
					Dr. PMPC Gunatilake
				Information Technology	Dr. UAJ Pinidiyaarachchi Dr. M.Dehiddeniya
11	Board of Study in Zoological Sciences	Prof. HMTGA Pitawala	Dr. A.Jayaweera	Applied Epidemiology	Dr. S.Kumburegarma
				Fish & Wildlife	Dr. LG Lokugalappaththi
				Management	Dr. RAD Eranda Indrajith

4.1 Sub-Committees of the Coordinating Committee

- (i) Quality Assurance Committee
- (ii) Curriculum Revision Committee
- (iii) Ethical Clearance Committee

5. ACHIEVEMENTS

5.1. Awards and Research Publications

Several research publications have resulted from the work carried out by academics/scientists affiliated to PGIS, out of which 62 publications have appeared in international journals including e-journals and 7 publications in local journals. In addition, more than 75 abstracts have been published based on the presentations made by the scientists at conferences. Several scientists have won awards for outstanding research, including National Science Foundation awards and National Research Council awards.

5.1.1. Research publications by PGIS affiliated members (in international journals)

1. Abeykoon, K. G. M. D., Dunuweera, S. P., Liyanage, D. N. D., & Rajapakse, R. M. G. (2020). Removal of fluoride from aqueous solution by porous Vaterite calcium carbonate nanoparticles. *Materials Research Express*, 7(3). <https://doi.org/10.1088/2053-1591/ab7692>
2. Abeysingha, S. N., Wijesundera, R. P., Hettiarachchi, C. V., & Perera, I. R. (2020). Zn based 3D-coordination polymer as the photoanode material in dye-sensitized solar cells. *Materials Chemistry and Physics*, 251, 123109. <https://doi.org/10.1016/j.matchemphys.2020.123109>
3. Abeywardena, M. R., Elkaduwe, R. K. W. H. M. K., Karunarathne, D. G. G. P., Pitawala, H. M. T. G. A., Rajapakse, R. M. G., Manipura, A., & Mantilaka, M. M. M. G. P. G. (2020). Surfactant assisted synthesis of precipitated calcium carbonate nanoparticles using dolomite: Effect of pH on morphology and particle size. *Advanced Powder Technology*, 31(1), 269–278. <https://doi.org/10.1016/j.appt.2019.10.018>
4. Alahakoon, A. A. C. B., Perera, G. A. D., Merritt, D. J., Turner, S. R., & Gama-Arachchige, N. S. (2020). Species-specific smoke effects on seed germination of plants from different habitats from Sri Lanka. *Flora: Morphology, Distribution, Functional Ecology of Plants*. <https://doi.org/10.1016/j.flora.2019.151530>
5. Athugala, Y. S., Gehan Jayasuriya, K. M. G., Gunaratne, A. M. T. A., & Baskin, C. C. (2020). Seed dormancy of 80 tropical montane forest species in Sri Lanka, the first dormancy profile for a tropical montane forest community. *Plant Biology*, plb.13203. <https://doi.org/10.1111/plb.13203>
6. Bandara, T. M. W. J., DeSilva, L. A., Gunasekara, L. B. E., Dehipawala, S., & Mellander, B. E. (2020). Determination of charge carrier transport parameters in a polymer electrolyte intended for Li-ion batteries using electrochemical impedance analysis. *Journal of Solid State Electrochemistry*, 24(5), 1207–1216. <https://doi.org/10.1007/s10008-020-04604-3>
7. Bandara, T. M. W. J., Furlani, M., Albinsson, I., Wulff, A., & Mellander, B. E. (2020). Diatom frustules enhancing the efficiency of gel polymer electrolyte-based dye-sensitized solar cells with multilayer photoelectrodes. *Nanoscale Advances*, 2(1), 199–209. <https://doi.org/10.1039/c9na00679f>

8. Bandara, T. M. W. J., Senavirathna, S. L. N., Wickramasinghe, H. M. N., Vignarooban, K., De Silva, L. A., Dissanayake, M. A. K. L., Albinsson, I., & Mellander, B. (2020). Binary counter ion effects and dielectric behavior of iodide ion conducting gel-polymer electrolytes for high-efficiency quasi-solid-state solar cells. *Physical Chemistry Chemical Physics*, 22(22), 12532–12543. <https://doi.org/10.1039/d0cp01547d>
9. Chathuranga, R. A. J., Liyandeniya, A. B., Dharmapriya, T. N., Deeyamulla, M. P., & Priyantha, N. (2020). Risk assessment and source apportionment of wet bulk deposition in three typical sites of Gampaha District, Sri Lanka. *SN Applied Sciences*, 2(8), 1–14. <https://doi.org/10.1007/s42452-020-3007-6>
10. Chathuranga, W. G. D., Kariyawasam, K., De Silva, A., & De Silva, W. A. P. P. (2020). Larvae of the blow fly *Caiusa testacea* (Diptera: Calliphoridae) as egg predators of *Polypedates cruciger* Blyth, 1852 (Amphibia: Anura: Rhacophoridae). *Journal of Threatened Taxa*, 12(17), 17374–17379. <https://doi.org/10.11609/jott.5740.12.17.17374-17379>
11. Chathuranga, W. G. D., Karunaratne, S. H. P. P., & De Silva, W. A. P. P. (2020). Predator–prey interactions and the cannibalism of larvae of *Armigeres subalbatus* (Diptera: Culicidae). *Journal of Asia-Pacific Entomology*, 23(1), 124–131. <https://doi.org/10.1016/j.aspen.2019.11.010>
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13. Dissanayake, M. A. K. L., Liyanage, T., Jaseetharan, T., Senadeera, G. K. R., & Dassanayake, B. S. (2020). Effect of PbS quantum dot-doped polysulfide nanofiber gel polymer electrolyte on efficiency enhancement in CdS quantum dot-sensitized TiO₂ solar cells. *Electrochimica Acta*, 347, 136311. <https://doi.org/10.1016/j.electacta.2020.136311>
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17. Galappaththi, M., Jayasuriya, K., & Gama-Arachchige, N. (2020). Storage and hydro-priming treatments to improve the seed quality of two traditional rice varieties; Batapola-el and Suwendal,

- from Sri Lanka. *Oryza-An International Journal on Rice*, 57(1), 25–35. <https://doi.org/10.35709/ory.2020.57.1.3>
18. Gayathree, T. H. I., Karunarathne, S. I., Ranaweera, L. T., Jayarathne, H. S. M., Kannangara, S. K., Ranathunga, A. P. D. T., Weebadde, C., & Sooriyapathirana, S. S. (2020). Green-spinach, red-spinach, and tree-spinach ("three-fold spinach" in Sri Lanka): An insight into phylogenetics and consumer preference. *Emirates Journal of Food and Agriculture*, 32(2), 82–91. <https://doi.org/10.9755/ejfa.2020.v32.i2.2065>
 19. Gunawardhana, B. P. N., Gunathilake, C. A., Dayananda, K. E. D. Y. T., Dissanayake, D. M. S. N., Mantilaka, M. M. M. G. P. G., Kalpage, C. S., Rathnayake, R. M. L. D., Rajapakse, R. M. G., Manchanda, A. S., Etampawala, T. N. B., Weerasekara, B. G. N. D., Fernando, P. N. K., & Dassanayake, R. S. (2020). Synthesis of Hematite Nanodiscs from Natural Laterites and Investigating Their Adsorption Capability of Removing Ni²⁺ and Cd²⁺ Ions from Aqueous Solutions. *Journal of Composites Science*, 4(2), 57. <https://doi.org/10.3390/jcs4020057>
 20. K. P. A. M. K. L., S. K., S. S., & J. G. (2020). Identification of forest cover variation in Mannar district, Sri Lanka using GIS and Remote Sensing techniques. *International Journal of Engineering Applied Sciences and Technology*, 5(2), 69–77. <https://doi.org/10.33564/ijeast.2020.v05i02.011>
 21. Kayanan, M., & Wijekoon, P. (2020). Stochastic restricted LASSO-type estimator in the linear regression model. *Journal of Probability and Statistics*. <https://doi.org/10.1155/2020/7352097>
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 23. Kotabewatta, P. A., Priyantha, N., & Lim, L. B. L. (2020). Biosorption of heavy metal ions on peel of *Artocarpus nobilis* fruit: 2. Improvement of biosorption capacities of Ni(II) through different modifications. *Desalination and Water Treatment*, 185, 226–236. <https://doi.org/10.5004/dwt.2020.25412>
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28. Lu, Y. C., Lim, L. B. L., & Priyantha, N. (2020). Chemical modification of pomelo leaves as a simple and effective way to enhance adsorption toward methyl violet dye. *Desalination and Water Treatment*, 197, 379–391. <https://doi.org/10.5004/dwt.2020.26004>
29. Lu, Y. C., Priyantha, N., & Lim, L. B. L. (2020). *Ipomoea aquatica* roots as environmentally friendly and green adsorbent for efficient removal of Auramine O dye. *Surfaces and Interfaces*, 20, 100543. <https://doi.org/10.1016/j.surfin.2020.100543>
30. Lu, Y. C., Priyantha, N., Lim, L. B. L., & Suklueng, M. (2020). Toxic yellow cow dung powder (Auramine O dye) removal via *Ipomoea aquatica* waste. *Desalination and Water Treatment*, 181, 422–435. <https://doi.org/10.5004/dwt.2020.25118>
31. Lu, Y. C., Priyantha, N., Lim, L. B. L., Mahadi, A. H., & Zain, N. A. M. (2020). *Ipomoea aquatica* root as a new potential adsorbent to remove methyl violet 2b dye in simulated dye contaminated wastewater. *Desalination and Water Treatment*, 197, 368–378. <https://doi.org/10.5004/dwt.2020.25933>
32. Madhusanka, S. A. D. R., Sandaruwan, R. D. L., Athar, M. M., Zaib, M., Arachchige, H. M. M. M., Dassanayake, B. S., Yoshio, M., & Gunawardhana, N. (2020). TiO₂ microparticles/reduced graphene oxide composite as anode material for lithium ion battery. *International Journal of Electrochemical Science*, 15(3), 2792–2805. <https://doi.org/10.20964/2020.03.11>
33. Manawaduge, C. G., Yakandawala, D., & Yakandawala, K. (2020). Does the IUCN Red-Listing 'Criteria B' do justice for smaller aquatic plants? A case study from Sri Lankan Aponogetons. *Biodiversity and Conservation*, 29(1), 115–127. <https://doi.org/10.1007/s10531-019-01873-x>
34. Mihiri Ekanayake, U. G., Dissanayake, D. M. S. N., Rathuwadu, N., Kumarasinghe, R. K. K. G. R. G., Rodrigo, S. K., & Mantilaka, M. M. M. G. P. G. (2020). Facile fabrication of fluoro-polymer self-assembled ZnO nanoparticles mediated, durable and robust omniphobic surfaces on polyester fabrics. *Journal of Fluorine Chemistry*, 235, 109565. <https://doi.org/10.1016/j.jfluchem.2020.109565>
35. Mihiri Ekanayake, U., Dissanayake, S., Gayanath Mantilaka, P., Senthilnathan, A., Dissanayake, D., & Mantilaka, M. (2020). In-Situ Synthesis of Zinc Oxide Nano-Seeds on Muscovite Mica Sheets as A Highly Active Photocatalyst. In *Journal of Nanoscience Research* (Vol. 1, Issue 1). <http://www.journalofnanotechnology.com>
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37. Nishshanke, G. B. M. M. M., Arof, A. K., & Bandara, T. M. W. J. (2020). Review on mixed cation effect in gel polymer electrolytes for quasi solid-state dye-sensitized solar cells. In *Ionics* (Vol. 26, Issue 8, pp. 3685–3704). Springer. <https://doi.org/10.1007/s11581-020-03668-5>
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61. Wijesinghe, K. E. H., Dissanayake, R. E. A., Iqbal, S. S., Priyantha, N., & Iqbal, M. C. M. (2020). Adsorption of phosphates from water by two polymer-silicate composites. *Bioremediation Journal*, 24(4), 231–250. <https://doi.org/10.1080/10889868.2020.1811631>
62. Wijewickrama, T., Karunaratne, I., Wijesundara, S., & Madawala, S. (2020). Community perceptions and responses on bamboo spread in native forests: a case study from Sri Lanka. *International Journal of Sustainable Development and World Ecology*, 27(3), 240–249. <https://doi.org/10.1080/13504509.2019.1706057>

5.1.2. Research publications by PGIS affiliated members (in local journals)

1. Bandaranayake, B. M. S. K., Ruklani, N. C. S., & Rubasinghe, S. C. K. (2020). New additions to leafy liverwort flora (Marchatiophyta, Jungermanniopsida) of Sri Lanka. *Journal of the National Science Foundation of Sri Lanka*, 48(2), 187–198. <https://doi.org/10.4038/jnsfsr.v48i2.8967>
2. Dissanayake, D. M. S. N., Mantilaka, M. M. M. G. P. G., & Pitawala, H. M. T. G. A. (2020). Synthesis of low-cost magnetite nano-architectures from Sri Lankan laterites. *Journal of Geological Society of Sri Lanka*, 21(2), 91–100.

3. Nandadeva, S. A. N., Samarakoon, S. M. N. S., & Rajapakse, S. (2020). Rhizobia inhabiting *Gliricidia sepium* in Puttalam district of Sri Lanka: assessment of stress tolerance and genetic diversity. *Sri Lanka Journal of Food and Agriculture*, 6(1), 23. <https://doi.org/10.4038/slifa.v6i1.79>
4. Rathnayake, P. G. R. G., Salih, R., Wijesundara, W. W. M. U. K., Sumanarathne, W. G. A. S., Ranaweera, L. T., Jayarathne, H. S. M., Weebadde, C. K., & Sooriyapathirana, S. D. S. S. (2020). Morphological variation, species delimits, and phylogenetic relationships of four important *Ipomoea* species in Sri Lanka. *Sri Lankan Journal of Agriculture and Ecosystems*, 2(1), 14. <https://doi.org/10.4038/sljae.v2i1.26>
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6. Weerasekera, D., Perera, S. J., Jayawardana, N., Rathnasekara, N., & Ranawana, K. (2020). A preliminary estimation of the sambar deer (*Rusa unicolor unicolor*): abundance in Horton Plains National Park, Sri Lanka. *Sri Lanka Naturalist*.
7. Wijewickrama, M. P. T., Karunaratne, W. A. I. P., Wijesundara, D. S. A., & Madawala, H. M. S. P. (2020). *Bambusa bambos* (L.) Voss. alters structure and composition of native forests: A study from moist evergreen forests in Sri Lanka. *Ceylon Journal of Science*, 49(2), 173. <https://doi.org/10.4038/cjs.v49i2.7738>

5.1.3. Book chapter publications by PGIS affiliated members

1. M.M.M.G.P.G. Mantilaka, W.P.S.L. Wijesinghe, D.M.S.N. Dissanayake, U.G. Mihiri Ekanayake, Anoja Senthilnathan, 13 - Current review on the utilization of nanoparticles for ceramic matrix reinforcement, Editor(s): Kheng Lim Goh, Aswathi M.K., Rangika Thilan De Silva, Sabu Thomas, In Woodhead Publishing Series in Composites Science and Engineering, Interfaces in Particle and Fibre Reinforced Composites, Woodhead Publishing, 2020, Pages 345-367, ISBN 9780081026656, <https://doi.org/10.1016/B978-0-08-102665-6.00013-3>.
2. W.P.S.L. Wijesinghe, M.M.M.G.P.G. Mantilaka, K.A.A. Ruparathna, R.B.S.D. Rajapakshe, S.A.L. Sameera, M.G.G.S.N. Thilakarathna, 4 - Filler matrix interfaces of inorganic/biopolymer composites and their applications, Editor(s): Kheng Lim Goh, Aswathi M.K., Rangika Thilan De Silva, Sabu Thomas, In Woodhead Publishing Series in Composites Science and Engineering, Interfaces in Particle and Fibre Reinforced Composites, Woodhead Publishing, 2020, Pages 95-112, ISBN 9780081026656, <https://doi.org/10.1016/B978-0-08-102665-6.00004-2>.

5.2. Ph.D., M.Phil. and M.Sc. Degrees Awarded

Ph.D. DEGREES AWARDED

Degree Awardee	Title of Thesis	Supervisor(s)
Biochemistry and Molecular Biology		
1. W T R Perera	Investigation of the effect of fluoride, water hardness, glyphosate, dehydration, manganese and mercury for chronic kidney disease of unknown etiology (CKDu) on animal models	Prof. J G S Ranasinghe Prof. N Alles Prof. R Waduge
Earth Sciences		
2. W M C M Wijesinghe	Clinico-epidemiological and spatio-temporal characteristics of dengue in a high-risk area: a case study in Mawanella, Sri Lanka	Dr. A A J K Gunathilaka Dr. P H D Kusumawathi Prof. F Noordeen
Physics		
3. T Jaseetharan	Synthesis and characterization of cadmium sulphide and lead sulphide semiconductor quantum dots and their applications in solar cells and infrared detectors	Prof. M A K L Dissanayake Prof. G K R Senadeera
4. N U Senarath Yapa	Investigation of spin reorientation of ferromagnetic thin films using modified third order perturbed Heisenberg-Hamiltonian	Dr. P Samarasekara
Plant Sciences		
5. M M A W P Mudannayake	Morphological and genetic diversity of Sri Lankan cycads (cycadaceae) and nutritional properties of their seeds	Dr. G A D Perera Prof. S D S S Sooriyapathirana Prof. P Samaraweera
6. M P T Wijewickrama	Investigation on ecological and socio-economic impacts of <i>Bambusa bambos</i> (L.) Voss: a case study from intermediate zone forests at Moragahakanda area, Sri Lanka	Dr. H M S P Madawala Dr. D S A Wijesundara Dr. W A I P Karunaratne

MPhil DEGREES AWARDED

Degree Awardee	Title of Thesis	Supervisor(s)
Biochemistry and Molecular Biology		
1. B S A T H	Systematics and phylogenetic relationships of	Prof. M Meegaskumbura Prof. S Rajapaksha

	Sudasinghe	the family cyprinidae: danioninae in Sri Lanka	Mr. R Petiyagoda
Chemical Sciences			
2.	W A K M Gunasekara	Isolation and potential applications of cellulose from sugarcane bagasse discarded as a waste biomass	Dr. M Y U Ganehenage
Plant Sciences			
3.	A A C B Alahakoon	Development of a seed vigor testing protocol for popular rice varieties of Sri Lanka and maintenance of high seed vigor during storage	Dr. N S Gamaarachchige Dr. D S D Z Abeysirwardena Dr. J W Damunupola
4.	W A D D Wasalamuni	Soil carbon sequestration potential of home gardens in Sri Lanka: as a way to mitigate global warming	Dr. A M T A Gunaratne Dr. R Rathnayake
5.	N G D N Nikagolla	Efficacy of soluble silicon in extending the keeping quality and enhancing fruit resistance to anthracnose and crown rot of banana	Dr. W A M Daundasekara Prof. M Y U Ganehenage
6.	S K Jayasekara	Microbial cellulases: the potential application in biofuel production, textile industry and agriculture	Dr. R R Rathnayake Dr. C L Abayasekara
Statistics & Computer Science			
7.	B V Lakshman	Agent compatible item response theory model and a clustering mechanism for e learning	Dr. J Wijekulasooriya Dr. M Sandirigama
Zoological Sciences			
8.	D P Bopearachchi	Molecular phylogeny and systematics of three jumping spider tribes (araneae : salticidae) of Sri Lanka	Prof. S P Benjamin Prof. I Karunaratne
9.	W M G A S T B Wijetunga	Impact of tropical forest fragmentation on figs and wasp pollinator interactions	Dr. W A I P Karunaratne Dr. A M T A Gunaratne
10.	C S Munasinghe	Association between coral bleaching and diversity of reef fish communities in the bar reef marine sanctuary, Kalpitiya, Sri Lanka	Dr. S K Yatigammana Mr. W M C S Wijesundara

MSc DEGREES AWARDED (SLQF Level 10)

	Degree Awardee	Title of Thesis	Supervisor(s)
Computer Science			
1.	M D Weerasinghe	Gatum: A Java based RESTful API for calculating average collision cross sections of molecules	Dr. L C Menikarachchi

Environmental Science

2.	M S Jayathilaka	Impact of laws and regulation on industries for water quality variation in Maha Oya	Prof. G B B Herath Dr. T W A W Wijayasinghe
3.	K N M H H Kosgahakumbura	Impacts of associated anions on lead uptake by Pistia stratiotes and Salvinia molesta: a new perspective for phytoremediation	Prof. C V Hettiarachchi Prof. S Madawala
4.	T A K L Thalangama	Investigation of the effect of plant growth on heavy metal removal in floating macrophyte systems	Prof. M I M Mowjood Dr. P B Weerakoon
5.	R M V N Gunarathne	Hydrometallurgical extraction of hazardous heavy metals from industrial sludge	Dr. M Vithanage Dr. A U Rajapaksha
6.	A A A Rahiman	Engineered clay-biochar composite for trapping antibiotic ciprofloxacin from aqueous media	Dr. M Vithanage

MSc DEGREES AWARDED (Old Syllabus)

	Degree Awardee	Title of Project Report	Supervisor(s)
Analytical Chemistry			
7.	Y K L N K Yatiwella	Evaluation of the performances of conventional water treatment process & selecting the best coagulant for Mahaweli river water	Ms. D Illangangedara Prof. A N Navaratne
8.	S S Achintha	Removal of Cd (II) ions from aqueous solutions by barnacle exoskeleton material as an adsorbent	Prof. H M D N Priyantha
9.	N P N R Kumarachchi	Trends in encapsulation capacity of dendrimers with varying core-functionality and generation	Dr. R J K U Ranathunga
Applied Epidemiology			
10.	N D W Karunarathna	Survey on probable arsenicosis in Mannar: a pilot study	Dr. S Fonseka Prof. R Chandrajith
11.	K P L Gunaratne	Short-term neonatal outcome in late preterm deliveries in Teaching Hospital Peradeniya	Prof. S Dharmarathne Dr. S Bandara
12.	J Thanushanthan	An assessment on clinical trials registered with the Sri Lanka Clinical Trials Registry (SLCTR) analysis of ten years data (2007-2016)	Dr. K Pethiyagoda
13.	W M A U K Wijesinghe	Assessment of sexual and reproductive knowledge and attitude among advanced level state school students in Kurunegala Municipal Council area	Dr. S Tennakoon

Applied Statistics

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| 14. | D M R W Divisekara | Forecasting the global market prices of major financial instruments using Arima and Garch models | Dr. L S Nawarathne |
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Biodiversity, Ecotourism and Environmental Management

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| 15. | B D Jayathilaka | Ecotourism potentials of Munnakkare Conservation Reserve, Negombo, Sri Lanka | Mr. C Wijesundara |
| 16. | D P T R Wijewardana | The study of ecotourism potential of the Madunagala area in Hambanthota district to develop as an ecotourism destination | Dr. A Gunawardane
Prof. S K Yatigammana |
| 17. | K V M Ariyasena | Ecotourism promotion plan to enhance the sustainable livelihood of rural communities living around Minneriya National Park, Sri Lanka | Dr. A M T A Gunaratne |
| 18. | K Y Gunasinghe | Study on the current tourism trend and potential of introducing ecotourism to the Ella Divisional Secretariat in Badulla District | Prof. S K Yatigammana
Dr. A Gunawardana |

Clinical Biochemistry

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| 19. | M K A DE Zoysa | Plasma parathyroid hormone (pth) reference intervals in an apparently healthy employed Sri Lankans in Western Province | Prof. R Sivakanesan
Dr. G Katulanda |
| 20. | J M S Jayaweera | The effect of excessive concentration of dipotassium ethylene diamine tetraacetic acid anticoagulant on complete blood count | Dr. G U S Wijesekara
Prof. R Sivakanesan |
| 21. | M B M R D T Marapana | The correlation between salivary and serum creatinine levels among chronic kidney disease patients of unknown etiology (CKDu) in Anuradhapura District, Sri Lanka | Prof. R Sivakanesan
Dr. J M K B Jayasekara |

Disaster Management

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|-----|-----------------|---|---|
| 22. | H A S Jisantha | Knowledge and attitude of stakeholders for dengue mitigation and association of socio economic factors | Dr. A A J K Gunathilake
Dr. K Perera |
| 23. | K K R Thanushan | Study on surface and groundwater contamination at Kodikamam North of Jaffna | Dr. A A J K Gunathilake
Dr. A Wijenayake |
| 24. | N Pirasanth | Knowledge and practices on disaster preparedness among allied health professionals at Teaching Hospital, Jaffna | Dr. S T Sarma
Dr. P A D Coonghe |

Engineering Geology and Hydrogeology

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| 25. | E I Jayasekara | A study on triggering mechanism of shallow landslides: a case study from Bulathsinhala, Sri Lanka | Dr. A A J K Gunathilake
Dr. H A G Jayathissa |
| 26. | D M L P Dassanayake | Incorporation of engineering geological measures into an engineering design - a case study of Kokmaduwa landslide mitigation, Sri Lanka | Mr. K N Bandara
Dr. A A J K Gunathilake |

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| 27. | J M Hettiarachchi | Evaluation of mitigation measures of landslide using monitoring instrument data; a case study on Udamadura landslide | Mr. K N Bandara
Dr. A A J K Gunathilake |
| 28. | K G N Saroja | Contribution of geology and soil properties for the mechanism of landslides: a case study from Morawakkanda landslide in Sri Lanka | Dr. A A J K Gunathilake
Mr. C S Menikpura |
| 29. | P D M Arachchi | Sand potentials in the ancient Walawe river course in Ambalantota area, Sri Lanka | Dr. A A J K Gunathilake
Mr. U De Silva |

Environmental Science

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|-----|---------------------------|--|---|
| 30. | W A M N S Dhanapala | Conservation importance of flora in tropical lowland wet evergreen forest fragment at Halgolla, Sri Lanka | Dr. A M T A Gunaratne |
| 31. | S Umasuthan | Relationship of water quality to avifaunal diversity in selected freshwater bodies in the Kilinochchi District, Sri Lanka | Mr. C Wijesundara |
| 32. | A Sivasingham | Comparison of insect diversity on selected invasive and native plant species in the Jaffna Peninsula, Sri Lanka | Mr. C Wijesundara |
| 33. | A B N Withanage | Monitoring of water quality and bacteriological parameters in the Rahas-Ella catchment before and after water treatment | Prof. R Weerasooriya
Dr. P W H K P Daulagala |
| 34. | D S M Weththasingha | Developing a coastal sediment dynamic model for Sri Lanka | Prof. N Ratnayake
Dr. A S Ratnayake |
| 35. | A M T I Amandakoon | Comparative study on determination of water quality using physicochemical parameters and benthic macroinvertebrates of Sarasavi Oya, University of Peradeniya, Sri Lanka | Dr. A C A Jayasundara |
| 36. | H K I C Hapuarachchi | Urban lake water quality: a case study in Kurunegala lake | Dr. K B S N Jinadasa
Prof. M I M Mowjood |
| 37. | R M K Ratnayake | Estimating the carbon footprint of the University of Peradeniya for year 2014 | Dr. D G G P Karunarathne |
| 38. | M S
Weerasooriyagedara | Adsorptive removal of antibiotic oxytetracycline hydrochloride using biochar montmorillonite clay composite | Dr. M Vithanage |

Experimental Biotechnology

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| 39. | H Varnakulasingham | Evaluation of mice incisional wound healing with probiotic therapy and contraction of muscle panniculus carnosus | Dr. M G Thammitiyagode |
| 40. | C A Dilo | Differentiation of the sibling species belong to <i>Phlebotomus argentipes</i> complex by targeting the mitochondrial cytochrome c oxidase subunit I gene | Dr. K Gajapathy |
| 41. | P A N D Sumathipala | Patterns of genotypic resistance to rifampicin and isoniazid and susceptibility to selected second line drugs among rifampicin resistant mycobacterium tuberculosis strains in Sri Lanka | Dr. D Vidanagama
Dr. C D Gamage |
| 42. | R S R Rajakulasooriya | A PCR based assay for the identification of <i>Acinetobacter baumannii</i> and <i>Acinetobacter</i> | Dr. T D C P Gunasekara |

nosocomialis from clinical isolates

Fish and Wildlife Management

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| 43. | K R Dalpathadu | Study on some biological and fisheries aspects of selected edible reef fishes in the east coast and west coast of Sri Lanka | Dr. S S K Haputhanthri
Dr. W M C S Wijesundara |
| 44. | P K P M P Kumara | Diversity of butterflies in Samanala Nature Reserve and Horton Plains National Park, Sri Lanka, a comparative study | Dr. C S Wijesundara |
| 45. | M D S De Silva | Investigating human influence towards stress and agonistic behavior of orphaned Sri Lankan elephant calves at elephant transit home, Udawalawe | Dr. E Rajapakshe
Dr. V Perera |
| 46. | J S Madushanka | Study on early successional changes in plant species diversity and composition after clear cutting a <i>Pinus caribaea</i> plantation, Sri Lanka | Prof. A Perera
Prof. S Ediriweera |

Gemmology and Industrial Minerals

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| 47. | N I Balage | A mineralogical and geological study of occurrence, origin and evolution of gem deposits in Kaluganga - Elahera gem area of Sri Lanka | Dr. U B Amarasinghe
Mr. R L D S Ranasingha |
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GIS and Remote Sensing

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| 48. | M M N C K
Marasinghe | Understanding the formation of cavities in marble, highland areas of Sri Lanka and their importance: GIS based study | Dr. A A J K Gunathilake |
| 49. | K M M Kulathunga | Spatial analysis of field properties affecting the paddy field; case study from Sabaragamuwa and Central Provinces | Dr. A A J K Gunathilake |
| 50. | R L A Wijenayake | A GIS based application for divisional administration; case study in a Grama Niladhari Division of Kotmale area | Dr. A A J K Gunathilake
Mr. M Gunawardhane |
| 51. | K G A P Karunasinghe | Real-time radiation monitoring, mapping and intelligent alerting system: a case study at University of Peradeniya | Mr. P M P C Gunathilake |
| 52. | E A S N
Wimalawardhana | GPR application for interpretation of slip surface of slow moving landslides in Sri Lanka | Dr. P Jayasinghe
Dr. A A J K Gunathilake |

Medical Microbiology

- | | | | |
|-----|-------------------------------------|--|--|
| 53. | P G I D Amarasiri | A pilot study to determine the sensitivity and specificity of microscopic examination and polymerase chain reaction for early detection of canine ehrlichiosis reported to the Government Veterinary Hospital, Gatembe | Prof. W D S J
Wickramasinghe
Dr. S S Iddamaldeniya |
| 54. | W G K C Kapukotuwa | Urinary catheter colonization of candida in an intensive care unit | Dr. N Dissanayake
Dr. A U B Pethiyagoda |
| 55. | W M T D Bandara
Warnakulasooriya | Bacterial contamination of mobile phones among a group of young adults in Kandy, Sri Lanka | Dr. A L Tennegedara
Dr. V Liyanapathirana |
| 56. | M G S D Bandara | Identification of potentially pathogenic free-living amoebae in water sources in Homagama and Colombo Divisional Secretariat Divisions in | Prof. D Iddawela |

Medical Physics

- | | | | |
|-----|-------------------|--|---|
| 57. | K K D L Ruvinda | Verification of applicability of enhanced dynamic wedge | Dr. N Jeyakumaran |
| 58. | A L Pallewela | Designing a noise reduction system in incubators used in level III neonatal intensive care unit in Sri Lanka | Dr. V Sivakumar |
| 59. | D M J Nuwan | Effectiveness of computed tomography scans for management of patients with chronic headache | Dr. J C marasinghe
Dr. J J K H Udupihilla |
| 60. | A N P Weerasinghe | Calibration and determination of the transit dose of HDR brachytherapy source | Dr. M A Y Ariyaratne |
| 61. | A J S P Nileema | Automated detection of pulmonary tuberculosis in digital chest radiographs | Dr. S Kulathunga |
| 62. | K B U Piyadeva | Artificial intelligence to detect and classify brain tumors using-magnetic resonance imaging | Dr. C P Jayalath
Dr. W K I L Wanniarachchi |
| 63. | R T N Rajapakshe | The effect of patient positioning error in three dimensional conformal radiotherapy for carcinoma in thorax region | Dr. K L Kandegedara
Dr. C P Jayalath |
| 64. | J H J K De Silva | Comparison of radiographic film with ionization chamber system for dose profile measurements of the Co-60 external beam radiotherapy | Dr. M Chenthuran
Dr. C P Jayalath |

Nanoscience and Nanotechnology

- | | | | |
|-----|---------------------|---|--|
| 65. | A S S Athukorala | Hydroxyapatite incorporated bacterial cellulose hydrogels as a cost-effective 3D cell culture platform | Dr. A C A Jayasundara
Mr. J Liyanage |
| 66. | D M N S Dissanayake | Polyaniline aluminium hydroxide nanocomposites: investigation of its anticorrosive and flame retardant properties | Dr. K G C Senaratne
Prof. R M G Rajapakse |

Physics of Materials

- | | | | |
|-----|----------------------|---|---|
| 67. | W M G B R B Wijekoon | Synthesis of graphene oxide and graphene by Sri Lankan natural vein graphite and its application as an anode material for lithium ion batteries | Dr. N Gunawardhana |
| 68. | H P Weeramuni | Characterizations of zinc doped cupric oxide thin films prepared by spin coating technique | Prof. P Samarasekara |
| 69. | S M Aazir | Synthesis, XRD analysis and resistance measurements of Bi-Pb-Sr-Ca-Cu-O Superconductors | Prof. F C Ragel
Dr. V A Senevirathne |

Science Education

- | | | | |
|-----|-----------------|---|-------------------------------|
| 70. | M R T D Mallawa | Investigation of the strengths and weaknesses of newly introduced Grade 10 science syllabus | Dr. A R G A M Abeykoon Manike |
| 71. | S R Dinali | Issues in implementing the curriculum of technology subject stream in school | Dr. S Yatigammana Ekanayake |
| 72. | A C Volantine | Investigation of the factors affecting mathematics performance of Grade 11 students in Thunukkai Education Zone | Dr. T Kalamany |

73.	E M T Bandaranayake	Effectiveness of applying self-determination theory in teaching mathematics in Hatton Education Zone	Dr. W D Chandrasena Dr. A K Amarasinghe
74.	W W M R G K S B Wijethunga	Investigation of the effectiveness of activity based instruction on learning mathematics of Grade 6 students in Galewela Education Zone	Dr. W D Chandrasena Dr. A K Amarasinghe
75.	D N K Herath	Factors affecting student's performance and motivation lesson units "vectors and systems of coplanar forces" in combined mathematics at GCE (A/L) in Kandy Education Zone	Dr. W D Chandrasena Dr. A K Amarasinghe
76.	A M S P Angammana	Effectiveness of multi-approach method in teaching mathematics: a case study in Puttalam Education Zone	Dr. W D Chandrasena Dr. A Amarasinghe
77.	K M M N Medagoda	An investigation of the relationship between Grade 5 scholarship results and GCE Ordinary /level performance	Dr. A Abeykoon Menike
78.	J M C N Jayasundara	A study to evaluate implementation of teaching/learning process in GCE (A/L) biosystems technology in Kandy District	Dr. P R K A Vitharana
79.	E G T P Premarathne	Identifying factors affecting the development of science stream in thousand secondary schools	Prof. I Karunarathne
80.	H M J S K Herath	Factors affecting teaching science for technology for GCE (A/L) students: a case study in Kurunegala District	Prof. L R A K Bandara
81.	N D S Wimalasena	Application of the constructivism for teaching and learning in Grade 10 science	Dr. W D Chandrasena
Water Resources Management			
82.	I U Gamage	Recent changes of agro well based water use pattern: a case study of Mawathawewa, Anuradhapura	Dr. M M P Perera

5.3. Postgraduate Output During the Year

5.3.1. Graduation

Even under Covid-19 pandemic situation, all academic activities have successfully been completed as per the scheduled in the calendar of dates, during the 2019/20 academic year as well. Accordingly, 270 graduands from Postgraduate Institute of Science received their postgraduate degrees.

Table 2: Total number of Graduates Produced in 2020

Degree	No. of Students
Ph.D.	15
M. Phil.	25
M.Sc.	230
Total	270

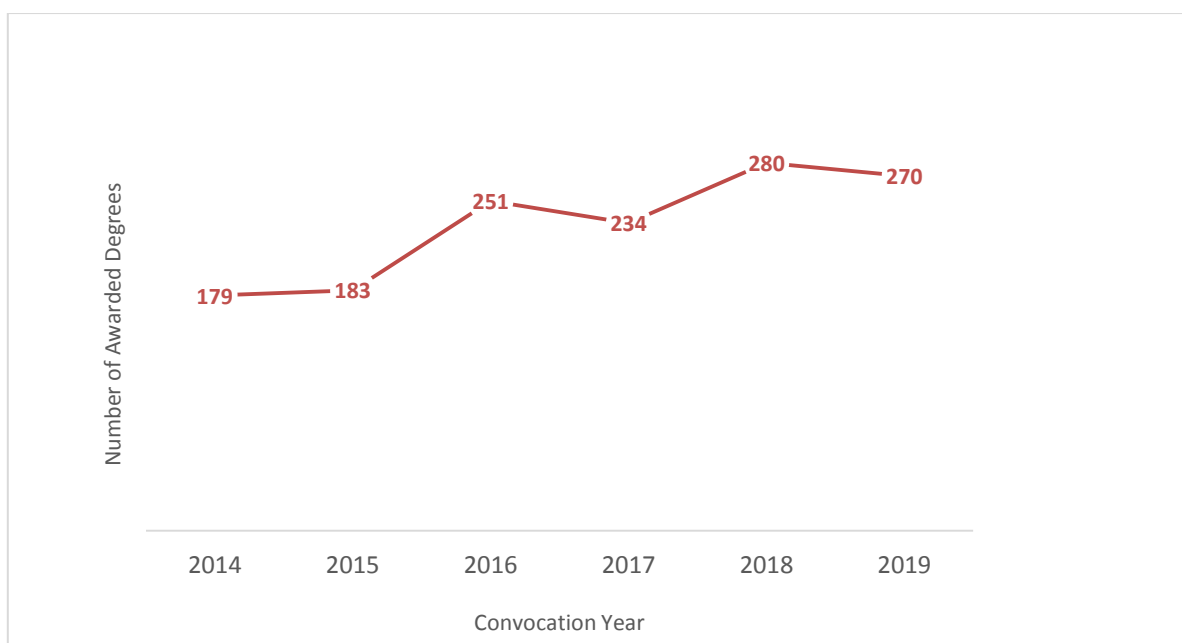


Figure 1: Number of Graduates produced in recent years

Table 3: The comparison of registration of students in the year 2019 and 2020

Board of Study	Course (Coursework)	Intake in 2020	Intake in 2019
Biochemistry & Molecular Biology	Masters in Clinical Biochemistry	12	19
	Masters in Experimental Biotechnology	36	22
Chemical Sciences	Masters in Analytical Chemistry	48	22
	Masters in Industrial Chemistry	17	07
	Masters in Nanoscience & Nanotechnology	49	34
Earth Sciences	Masters in Disaster Management	20	15
	Masters. in GIS & Remote Sensing	--	34
	Masters in Engineering Geology & Hydrogeology	--	15
	Masters in Water Resources Management	17	-
	Masters in Gemmology & Industrial Minerals	15	-
Environmental Science	Masters in Environmental Science	42	25
	Masters in Biodiversity, Ecotourism & Environment Management	14	18
Mathematics	Masters in Industrial Mathematics	15	13
Physics	Masters in Physics of Materials	15	16
	Masters in Medical Physics	13	09
Plant Sciences	Masters in Medical Microbiology	36	-

	Masters in Pharmaceutical Botany	--	12
Science Education	M.Sc. in Science Education	11	10
	PG Diploma in Science Education	11	10
Statistics & Computer Science	Masters in Applied Statistics	26	34
	Masters in Computer Science	55	55
	PG Diploma in Information Technology	--	-
	Masters in Information Technology	--	37
	Masters in Data Science	43	--
Zoological Sciences	Masters in Applied Epidemiology	09	-
	Masters in Fish & Wildlife Management	--	-
TOTAL		504	397

According to Table 3, the total number of student registration in 2020 has been increased. Ten Master programmes got greater number of registrations compared to 2019 intake.

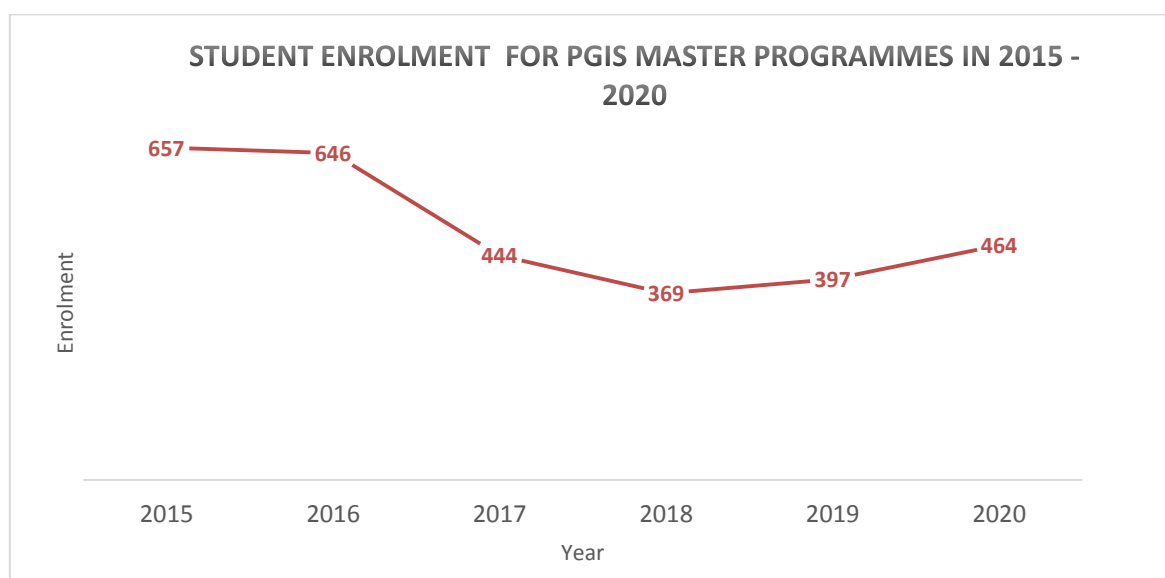


Figure 2: The number of Master/MSc students registered during recent years

Table 4: Local Students to Postgraduate Degree Programmes

<i>Board of Study</i>	<i>Course Name</i>	<i>Intake 2020 Ph.D.</i>	<i>Intake 2020 M.Phil.</i>	<i>Intake 2020 M.Sc.</i>	<i>Diploma</i>	<i>No. of Graduated M.Sc./M.Phil./Ph.D. Please see the foot note*</i>			<i>No. of Diploma Completed</i>
						<i>M.Sc.</i>	<i>M.Phil.</i>	<i>Ph.D.</i>	
Biochemistry & Molecular Biology	M.Sc. in Clinical Biochemistry			12	--	05			--
	M.Sc. in Experimental Biotechnology	--	02	36	--	05	01	01	05
Chemical Sciences	M.Sc. in Analytical Chemistry			48	--	22			05
	M.Sc. in Industrial Chemistry	--	05	17	--	04	01	02	09
	M.Sc. in Nanoscience & Nanotechnology			49	--	10			12
	M.Sc. in Biodiversity, Ecotourism and Environment Management	--	06	18	--	04	02	--	05
Environmental Science	M.Sc. in Environmental Science			29	--	32			04
Earth Sciences	M.Sc. in Engineering Geology & Hydrogeology			--	--	06			--
	M.Sc. in Disaster Management			20	--	04			07
	M.Sc. in GIS & Remote Sensing	01	05	--	--	09	01	01	13
	M.Sc. in Water Resources Management			17	--	01			04
	Gemology & Industrial Minerals			15	--	02			--

Plant Sciences	M.Sc. in Medical Microbiology			03	--	05			02
	M.Sc. in Pharmaceutical Botany	--	05	--	--	03	04	02	--
Physics	M.Sc. in Physics of Materials			15	--	09			12
	M.Sc. in Medical Physics	--	04	13	--	09	01	02	01
Science Education	M.Sc. in Science Education			11	--	18			02
	PG Diploma in Science Education	--	04	--	11	--	--	--	--
Statistics & Computer Science	M.Sc. in Applied Statistics			26	--	09			07
	M.Sc. in Computer Science			55	--	21			12
	PG Diploma in IT	02	04	--	--	--	02	01	--
	M.Sc. in Information Technology			37	--	09			--
	Masters in Data Science			43	--	--			--
Mathematics	M.Sc. in Industrial Mathematics	--	05	15	--	13	01	--	08
Zoological	M.Sc. in Applied Epidemiology			--	--	07			--
	M.Sc. in Fish & Wildlife Management	--	01	--	--	04	04	--	--
TOTAL		03	41	504	11	211	17	09	117

*** Note: Students graduated are from the previous batches**

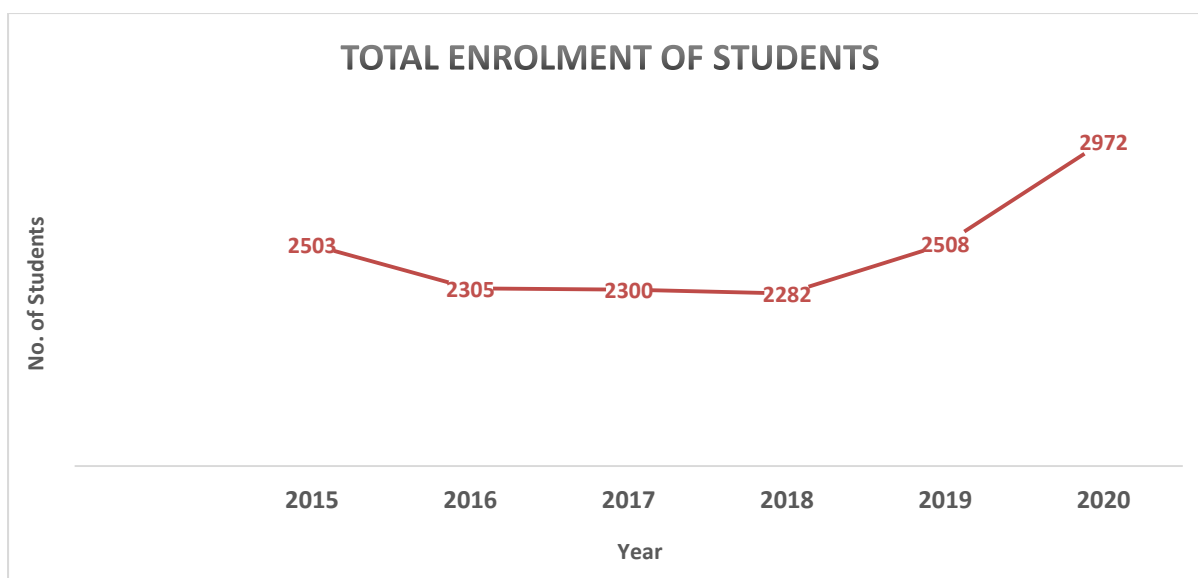


Figure 3: Total Enrolment

Table 5: Foreign Students registered for Postgraduate Degree Programmes at PGIS

Programme of Study	Full Time/ Part Time	Student Enrolment (Total No. of Registered Students as at 31st December 2020)		
		MALE	FEMALE	TOTAL
Ph. D.	Full Time	1	0	1
M.Phil.	Full Time	1	0	1
M.Sc.	Full Time	5	3	8

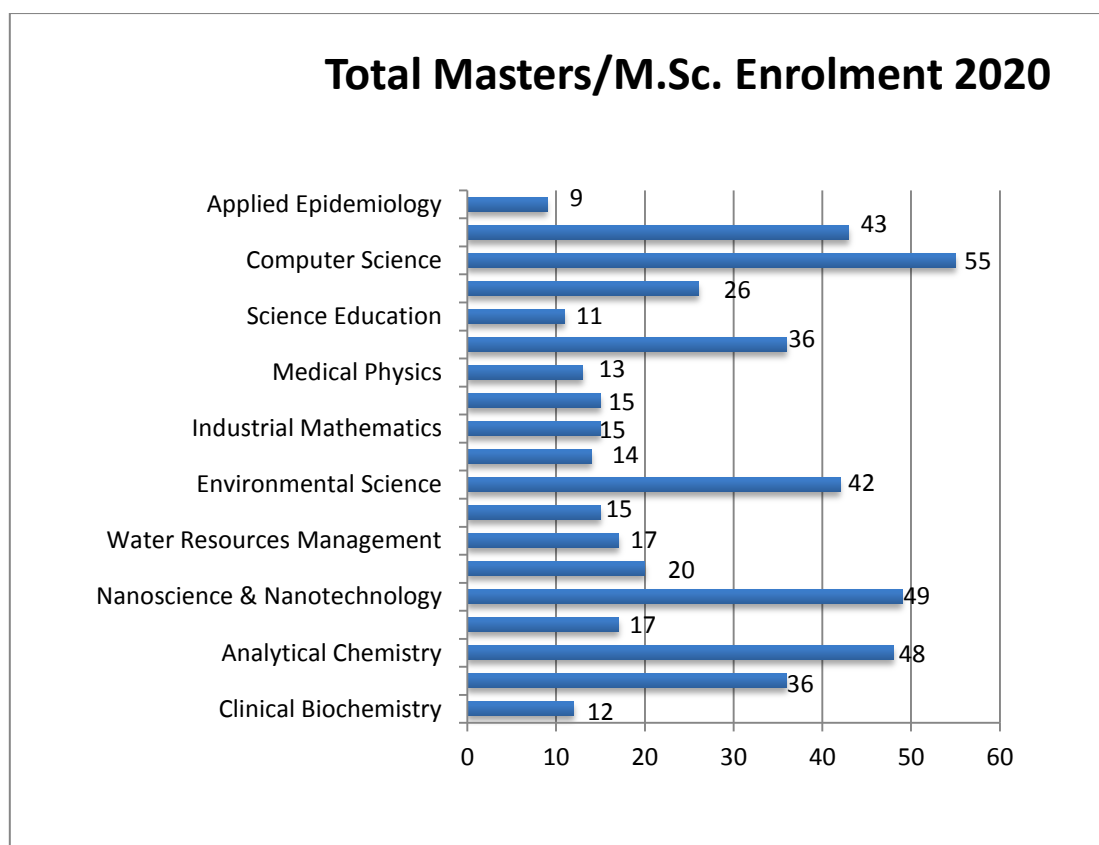


Figure 4: Total students registered for PGIS Master/M.Sc. programmes

Table 6: New Courses BOM Approved in 2020

Programme	Programme Type	Duration	Medium
Mathematics	Master of Science Degree Programme	2 Years	English

Table 7: New Courses Commenced in 2020

Programme	Programme Type	Duration	Medium
Data Science	Master of Science Degree Programme	2 Years	English

Table 8: MOU's Initiated with International Organizations

Foreign Institute	Duration	Purpose
NIL	--	--

5.4. Industrial Outreach, R & D and Entrepreneurship Activities

In 2020, PGIS newly implemented many new industrial outreach programmes and designed entrepreneurship programmes after forming Industrial Outreach subcommittee of PGIS. Later PGIS established a new unit called Industrial and Entrepreneur Unit. Webpage and Industrial Information Management System has been developed.

5.4.1. PGIS industrial engagement models

PGIS engages with industries under four models as given below. The major model is on allowing industries to provide research grants to solve their problems through registering an M.Phil/PhD student/s.

Model 1: Fund a research assistant: The industry or investor is allowed to submit a research proposal or research idea. PGIS can provide suitable research assistant to work full time on project subjecting to research agreements prepared case by case. The research assistant can be an M.Phil. student working full time for minimum 2 years, PhD student working full time minimum for 3 years or M.Sc. student working on 1 year research project.

Model 2: Invest on already completed project/product to commercialize: Investors are invited to invest on already completed projects with commercial potential in order to bring the project to next level of commercialization. Please fill form in the link to enter this programme as an investor.

Model 3: Client R & D projects: 3-12 months research and development projects can be provided to PGIS. The PGIS expert team of the relevant area will evaluate and have initial discussions with the client. Then PGIS will develop a research proposal with inputs of the client. When the client is satisfied with the proposal, PGIS will start the project. Please note that PGIS is taking a research engagement fee to develop a research proposal which will be waved off after engaging with the project. Project cost will be decided at the proposal development stage.

Model 4: Small-scale business support: PGIS is focusing on developing small scale businesses to assist such businesses to grow into a leading industries/businesses and to bring businesses into an international level.

5.4.2. Core industrial areas of PGIS

- **Mineral based Value Added Products**

Our researchers are capable of synthesizing materials and products using mineral/earth resources for industrial, biomedical, electronic, environmental and construction fields. There are product oriented research activities on marbles, apatite, laterites, mica, magnetite, graphite, rare earth deposits, mineral sands and value addition on gem minerals

- **Surfaces and Coatings Technologies**

Smart coatings which are not limited to antimicrobial coatings, self-cleaning coatings, radiation blocking & reflective coatings, anticorrosive coatings, abrasion resistant coatings and luminescent coatings

- **Computer applications, software mobile apps development**
Our scientists and software developers are capable of developing softwares, mobile applications, web-development based projects
- **Biotechnology**
- **Packaging solutions**
Smart packaging developments such as packages with barrier properties to keep long shelf-life, spoilage indicating packages, heat resistant packages, biopolymer based package development, biodegradable packaging materials and ethylene scavenging packages
- **Cosmetics and Nutraceuticals**
Natural products based cosmetics & nutraceuticals, mineral based cosmetics (E.g. Talk Powders), fragrances, antimicrobial creams, anti-aging products, anti-wrinkle products, sun protection creams and any other requirement
- **Natural products**
Researchers have extracted and isolated many compounds from natural species including plants, fungi, lichens and many other species. Such compounds can be converted into products of cosmetics, pharmaceuticals, nutraceuticals, coating materials, pigments, repellents, fertilizers and pesticides
- **Waste to products, waste treatment and waste minimization technologies**
Some wastes can be converted into useful products and energy. Industrial wastes can be used as raw-materials to develop another industry. With this idea PGIS researchers are capable of developing technologies to minimize wastes and to convert waste into useful products
- **Air and water purification**
Air and water pollution have become a serious global problem. Our researchers work on developing air and water purification technologies and products
- **Agricultural and Food product development**
Post-harvesting technologies, new food products with good nutrition values, foods with low glycemic index and food products with medicinal value can be developed. Agricultural products such as equipment, fertilizers, pesticides, antimicrobial products, weedicides and sustainable agriculture products can be developed under PGIS industrial platform
- **Smart devices and sensors**
Devices and sensors for various applications such as electronic industry, medical sector, automobiles, domestic applications, agriculture and environmental applications can be developed
- **Data science solutions and Big Data Analysis**
Data science is one of key areas of PGIS. PGIS academics and research students are capable and skilled to provide data solutions and data handling of industries, super-markets and any other needy organizations
- **Polymer Technology**

Polymers can be synthesized and developed. Polymer based composites and products including nanocomposites can be developed at PGIS

- **Advanced Materials**

Our researchers are capable of developing advanced materials for any application. We are also capable of developing methods and processes to synthesize existing materials. Materials such as coatings, polymers, purifiers, papers, fire-retardants, anticorrosive materials, hard materials, ceramics, textiles or any other requirements can be developed

- **Smart textiles**

Textile is one of the major industries in Sri Lanka as the country manufacture high quality textiles. PGIS research cover smart textiles not limited to antimicrobial textiles, antistatic textiles, medical textiles (Wound dressing, textile sensors etc.), abrasion resistant textiles, fire-retardant textiles, stimuli responsive textiles and self-cooling/heating textiles

- **Pharmaceuticals and healthcare products**

Pharmaceutical products can be synthesized under synthetic organic chemistry and natural products sections. Other healthcare products such as smart surgical gloves, devices, sensors, sanitizers and medical equipment can be developed

- **Energy storage and harvesting**

Solar cells, fuel cells, super-capacitors and batteries are major developments under PGIS research commercialization platform

- **Analytical Equipment and Instrument Manufacturing and Maintenance**

Currently almost all analytical instruments and equipment are developed in developed foreign countries. However, PGIS researchers have capability to develop many analytical instruments in Sri Lanka by developing technologies

5.4.3. Entrepreneurship programmes including startups for PGIS students and alumni

PGIS initiated supporting its students and alumni in commercializing their research projects and start their own businesses. Key programmes for PGIS internal students and alumni include PGIS spinoff programme, patent desk to support patent drafting and business linkage with University business linkage cell. In addition, annual workshop will be organized in collaboration with Startup X Foundry and professionals of PGIS Alumni.

5.4.4. Engaged industries and projects

Following projects and companies were attracted to PGIS.

1. **GSMB Technical Services (GSMBTS) (Pvt) Ltd**

A project on synthesis of value added products using calcite deposits at Balangda area of Sri Lanka was initiated. The GSMBTS is government owned company operating under Ministry of Environment. The allocated funds for the project exceeds LKR 100 million investment to go for a

processing plant. M.Phil. student will register at PGIS under this project. The project commercialization plan was presented to the Minister of Environment by Prof. A. Pitawala, Dr. Prasanga Mantilaka and Dr. Bhathiya Athurupana.



2. **Texco International (Pvt) Ltd**

A project on product development using zircon sand and establishment of a processing plant. Allocation is LKR 3.3 million. First phase of the project was completed and the company is planning to establish a processing plant. Two M.Phil. Students will register at PGIS under 2nd phase of this project



3. **MAS Linea Intimo (Pvt) Ltd**

MAS Linea Intimo agreed to fund PGIS research students.

4. **Noritake Porcelain Lanka (Pvt) Ltd**

Several analytical activities have been completed.

5. **Atlas Axillia (Pvt) Ltd**

Atlas, the leading stationary brand in Sri Lanka engaged with PGIS. The company started using PGIS Analytical services and pitched two projects under PGIS business engagement model 1. About 3 M.Phil./PhDs will be funded under this collaboration.

5.5. Initiation of New Units

PGIS started five new units in 2020 to formalize its activities and as features in highly reputed world class institutes. The units will operate from early 2021 onwards. The details and functions of these units are given below

1. Career Guidance and Development Unit

- Organizing annual workshops
- Organizing interview sessions with employers
- Identifying new career opportunities for PGIS degree programmes
- Guiding PGIS students to find employments
- Guidance of students to build their profiles to meet with employment and existing career
- Contribution to curriculum revisions to meet with employment
- Guiding higher studies scholarships when student request

2. Industrial and Entrepreneurships Unit

- Planning and organizing workshops and short courses for industrialists and industrial employees to disseminate knowledge
- Organizing industrial workshops for PGIS students
- Assistance for PGIS students for their startups
- Bridging industries to PGIS
- Managing industrial fund and allocation of funds for PGIS research commercialization activities
- Development of policies, TOR and SOPs
- Fund raising for industrial projects and startups
- Development of business proposals
- Facilitating industrial oriented research project
- Supporting students to prepare file patent applications
- Collaboratively work with University Business linkage office and the Industrial Interaction Cell of Faculty of Science, University of Peradeniya
- Maintenance of industrial webpage
- Development of new academic programmes related to industries

3. Research Grants, Donations and Scholarship Support Unit

- Management of PGIS Research Grant programme annually
- Attraction of research grants
- Finding research grant and funding openings and aware and encourage academic staff to apply through PGIS
- Handling finance matters
- Guiding research grant applications whenever necessary
- organizing annual workshop or awareness programme on preparation of effective proposals and financial management for grant applicants
- Implementation of scholarship programmes for PGIS students and preparation of awarding schemes
- Connections with the University Research Council
- Organizing award ceremonies to encourage researchers
- Effective utilization of funds like assistance of startups, purchasing of equipment and instruments etc.

4. Counseling unit

- Counselling PGIS students to solve their problems
- Organizing motivational sessions for staff and students

5. PGIS media unit

- Covering PGIS events with photography and videography
- Designing and preparation of video promotions about PGIS
- Managing social media pages of PGIS
- Plan and implement ways of improving visibility of PGIS
- Handling virtual events

5.6. Research Facilities and Activities

5.6.1. Research facilities and laboratory functioning

Procurement process of purchasing Wavelength Dispersive X-ray Fluorescence (XRF) Spectrophotometer was initiated. Laboratories were prepared for students to conduct their research projects conveniently by providing facilities including needy equipments, chemical & consumable stores and storage areas.



PGIS grant programme 2020 was successfully implemented. Twenty four (24) applications have been received from academic staff members attached to PGIS. The total budget allocation for 2020/2021 is LKR 5 million.

5.6.3. Research collaborations with national institutes

Setting-up research collaborations with national and international research institutes, organizations and universities is very important to improve research culture and facilitate research projects of PGIS students. Therefore, as first attempt, initiated signing memorandum of understanding (MOU) with national research institutes. MOU was prepared and shared with following institutes initially

- Industrial Technology Institute
- Sri Lanka Institute of Nanotechnology
- Rubber Research Institute
- Geological Survey and Mines Bureau
- National Institute of Fundamental Studies

6. CONFERENCES AND SHORT-TERM PROGRAMMES

The PGIS annually conducts 20-30 short-term programmes including conferences and in-service training programmes; some of those programmes are conducted on a regular basis. The regular short-term programmes conducted in 2020 include three Workshops on Scientific Writing and seven Short Courses on GIS and Applications, and the 'PGIS Research Congress (RESCON 2020)'.

6.1. PGIS Research Congress (RESCON) - 2020



The PGIS Research Congress (PGIS RESCON) was initiated to promote and strengthen the research culture of the Postgraduate Institute of Science (PGIS), University of Peradeniya, and in turn to contribute to the expansion of research activities of the country. As a premier event in the academic calendar of scientists in the country, the PGIS RESCON 2020 provided the opportunity for researchers to disseminate their findings and update their knowledge on the cutting-edge of scientific research in Sri Lanka. After six extremely successful events from 2014 to 2019, this year its seventh Research Congress 'RESCON - 2020' was successfully held from 26th to 28th of November 2020.

Over three hundred and fifty scientists participated at the congress and the event was inaugurated ceremonially by the Chief Guest, Prof. Sampath Amaratunge, Chairman, University Grants Commission (UGC) on Thursday, 26th November 2020 at the Postgraduate Institute of Science. The Guest of Honor for the occasion was Prof. Upul B. Dissanayake, the Vice-Chancellor, University of Peradeniya. Prof. S. H. P. P. Karunaratne (Deputy Vice-Chancellor, University of Peradeniya) delivered the keynote address at the inauguration.

Virtual Technical Sessions of the PGIS Research Congress were held in four online parallel sessions during 27th and 28th November 2020. RESCON 2020 has brought together a rich diversity of researchers from almost all the state universities, non-state universities, research institutions and industries to share ideas and new perspectives in a wide range of topics.

Two hundred and thirty (230) research papers were published out of 283 abstracts following a peer review process, the highest number ever received for a PGIS RESCON. There were total of 30 virtual technical sessions using four video conferencing rooms over two complete days each of session was chaired by two senior academics. A team of young academics of 60 acts as 'academic coordinators' facilitated the smooth conduct of online presentations between chairpersons, presenters and the technical team. All the abstracts were orally presented under five broad themes: Earth and Environmental Science; Information & Communication Technology, Mathematics and Statistics; Life Sciences; Physical Sciences; and Science Education. The online sessions of RESCON 2020 provided an excellent platform for postgraduate students and researchers from many disciplines to interact among themselves.

6.2. Short-Term Programmes



Some additional short-term programmes conducted in 2020 were: **'Workshop on Patent Prior Art Search & Drafting'**, **'Workshop on Postgraduate Opportunities in Japan'**, **'Workshop on Molecular Biology and Recombinant DNA Technology'**, **'Workshop on Career Guidance'**, **'2-Day Short Course Buffet on Computer & Data Sciences'**. Two additional conferences were also held in 2020: International Conference on Environmental & Medical Statistics (ICEMS) in collaboration with the Faculty of Science, and 2nd International Conference on Environmental Monitoring and Management (EMM 2020) in collaboration with the Center for Environmental Studies and International Relations Office. Both the PGIS Research Congress and the Conference on Environmental Monitoring and Management were conducted through a virtual platform. Virtual Educational Research Conference for teachers was conducted with participation of 75 presenters (online).

The PGIS also offers consultancy services to local industries and state- and private-sector institutions.

Table 9: Workshops Held in 2020

No.	Programme /Theme	Organized by Fac./Dep./Center/Unit	Date of held	No. of Participants
1.	Seminar/Do genes hijack and play-hide-and-seek? Dissecting “designer” genes for crop improvement for Academics, scientists, research scholars & research students	PGIS - Board of Study in Plant Sciences	Jan 22	45
2.	116 th Short Course (Advanced) on GIS & Applications for Staff of National Water Supply & Drainage Board (NWSDB)	PGIS & Greater Colombo Water & Wastewater Management Improvement Investment Programme (GCWWMIIIP)	Jan 27 - Feb 1	35
3.	117 th Short Course (Advanced) on GIS & Applications for Staff of National Water Supply & Drainage Board (NWSDB)	PGIS & Greater Colombo Water & Wastewater Management Improvement Investment Programme (GCWWMIIIP)	Feb 10 - 15	45
4.	Workshop on Patent Prior Art Search & Drafting for Researchers & Product Developers	PGIS - Board of Study in Plant Sciences	Feb 12	12
5.	Workshop on PG Opportunities in Japan for Academic Staff & Students	Embassy of Japan/SLJSC/InRO/PGIS	Feb 13	100
6.	18 th Workshop on Scientific Writing for PGIS students for PGIS Students following MSc, MPhil & PhD programmes	PGIS	Feb 29-March 1	109
7.	118 th Short Course (Advanced) on GIS & Applications for Staff of National Water Supply & Drainage Board (NWSDB)	PGIS & Greater Colombo Water & Wastewater Management Improvement Investment Programme (GCWWMIIIP)	March 2 - 7	47
8.	119 th Short Course (Advanced) on GIS & Applications for Staff of Ceylon Electricity Board	PGIS	July 3 - 6	09
9.	19 th Workshop on Scientific Writing for PGIS students for PGIS Students following MSc, MPhil & PhD programmes	PGIS	July 10 - 12	87
10.	Workshop on Molecular Biology and Recombinant DNA Technology for GCE Advanced Level Biology teachers from	PGIS - Board of Study in Science Education and Ministry of Education (Kandy Educational	July 11 - 12	41

	Central Province	Zone)		
11.	120 th Short Course on GIS & Applications for Staff of the National Programme for Tuberculosis Control and Chest Diseases (NPTCCD), Ministry of Healthcare and Indigenous Medical Services	PGIS - Board of Study in Earth Sciences	July 27 - Aug 1	40
12.	121 st Short Course on GIS & Applications for Officers of Department of Motor Traffic	PGIS - Board of Study in Earth Sciences	Sep 7 - 12	32
13.	Workshop on Career Guidance for PGIS Students	PGIS - Board of Study in Science Education	Sep 11	45
14.	20 th Workshop on Scientific Writing for PGIS students for PGIS Students following MSc, MPhil & PhD programmes	PGIS	Sep 11 - 13	86
15.	2-Day Short Course Buffet on Computer & Data Sciences for University Academics, Professionals, Researchers, Officers in Commercial Enterprises, Postgraduate and Undergraduate Students	PGIS - Board of Study in Statistics & Computer Science	Sep 12 - 13	50
16.	122 nd Short Course on GIS & Applications for Officers of Department of Wildlife Conservation, Sri Lanka Navy, Airport and Aviation Services (Sri Lanka) LTD, University Academics, Research Assistants (NIFS)	PGIS - Board of Study in Earth Sciences	Sep 21 - 26	13

7. DEVELOPMENT OF HUMAN AND PHYSICAL RESOURCES

7.1. Human Resources

Several members visited overseas universities and laboratories for special training programmes, workshops, conferences and collaborative research activities. Meanwhile, an academic staff position and one non-academic vacancy were filled during the year 2020.

During the year both faculty as well as non-academic staff of PGIS rendered valuable service to the achievement of institutional goals.

Table 10: Academic Staff (Visiting)

Board of Study	Subject	Senior Professor/ Professor/Assoc. Professor	Senior Lecturer/ Lecturer	Instructor
Biochemistry of Molecular Biology	Clinical Biochemistry	11	11	03
	Experimental Biotechnology	09	05	10
Chemical Sciences	Analytical Chemistry	04	16	13
	Industrial Chemistry	14	13	05
	Nanoscience & Nanotechnology	18	26	06
Earth Sciences	Disaster Management	04	17	-
	Engineering Geology and Hydrogeology	06	16	07
	GIS & Remote Sensing	-	11	08
	Gemology & Industrial Minerals	14	21	-
	Water Resources Management	10	12	-
Environmental Science	Biodiversity, Ecotourism & Environment Management	09	06	03
	Environmental Science	10	10	06
Mathematics	Industrial Mathematics	03	14	-
Physics	Physics of Materials	04	11	02
	Medical Physics	06	15	-
Plant Sciences	Medical Microbiology	06	25	02
	Pharmaceutical Botany	21	21	08
Science Education	Diploma in Science Education	-	13	-
	Science Education	24	41	01
Statistics & Computer Science	Applied Statistics	02	12	-
	Computer Science	05	09	08
	Information Technology	05	15	07
	Data Science	05	16	-
Zoological Sciences	Applied Epidemiology	05	10	-
	TOTAL	195	366	89

Table 11: Approved Cadre and Present Staff as at 31st December 2020 - All Staff

Service Category	Designation	Salary Code	DMS approved Cadre	Existing Cadre		Vacancies	
				Permanent	Temporary		
Senior Level	Director	U - AC 5	01	01	-	-	
	Professor	U - AC 5	05	-	-	03	
	Associate Professor	U - AC 4		-	-		
	Senior Lecturer/Lecturer/Lecturer (Probationary)	U - AC 3		01	01		
	Senior Assistant Registrar/Deputy Registrar	U - EX 2	01	01 (Assistant Registrar)	Duties covered by an Assistant Registrar		
	Senior Assistant Bursar/Deputy Bursar	U - EX 2	01	01	-	-	
Tertiary Level	Scientific Assistant	U - AS 1	01	-	-	01	
	Assistant Registrar	U - EX 1	01	01	-	-	
	Electronics Engineer	U - EX 1	01	01	-	-	
Secondary Level	Technical Officer (Audio Visual)	U - MT 1	01	01	-	-	
	Technical Officer	U - MT 1	03	02	-	01	
	Management Assistant	U - MN I	07	11	-	-	
			04 (Personal to the Holder)		-	-	
	Management Assistant (Store Keeping)	U - MN I	01	01	-	-	
	Management Assistant (Book Keeping)	U - MN I	01	01	-	-	
	Management Assistant (Shroff)	U - MN I	01	01	-	-	
Primary Level	Driver	U - PL 3	03	02	-	01	
	Electrician	U - PL 3	01	-	-	01	
	Lab Attendant	U - PL 2	01	-	-	01	
	Works Aide	U - PL 1	04	03	-	01	
	Office Machine Operator	U - PL 1	01	-	-	01	
*)Temporary Research Assistant		Fixed	02	-	02	-	
*)Temporary Instructor		Fixed	02	-	01	01	

*) Cadre positions of Temporary Research Assistant and Temporary Instructor are not permanently categorized.

Table 12: Training Programmes Conducted during the Year (PGIS Staff Undergone)

Programme/Theme	National / International	Date of held	Duration	No. of Participants
Workshop on Career Development & Motivation by Dr. W D Chandrasena	National	17.09.2020	1 Day	29
Workshop on Institutional Review by Prof. R W Pallegama	National	30.09.2020	1 Day	29

7.2. Physical Resources

The Data Science Unit of the PGIS was upgraded with a newly installed High Performance Server and IT Infrastructure of the PGIS was further enhanced with commissioning of 4 new servers.

7.2.1. Science library – University of Peradeniya

Table 13: Library Allocations Received in 2020

PGIS Allocation	- Rs.	223406.00
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Table 14: Acquisitions

Books	-	11
Theses	-	161

Table 15: Library User Categories

Postgraduate Students	-	713
Undergraduate Students	-	1386
Permanent Academic Staff Members	-	131
Permanent Academic Support Staff Members	-	01
Temporary Academic Staff Members	-	17
Technical Officers	-	06
Total	-	2254

Table 16: Library Books Borrowed

Postgraduate Students	-	65
Undergraduate Students	-	875
Permanent Academic Staff Members	-	78

Permanent Academic Support Staff Members	-	03
Temporary Academic Staff Members	-	00
Total	-	1021

Table 17: In-House Usage

Postgraduate Theses	-	57
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8. ADMINISTRATIVE AND FINANCIAL ACHIEVEMENT

PGIS was received a subject to qualified audit opinion for 2020.

8.1. Details of the Infrastructure Facilities

Table 18: All Ongoing Capital Projects

Name of the Project	Name of the Contractor	Tender Amount with VAT (Rs.)	Interim Payments upto 31.12.2020 (Rs.)	Physical Progress %
Renovation of Roof	Rajapaksha Constructions Pvt	2.15Mn		26%

Table 19: Total Income in 2019 Vs 2020

	2019 (Rs.)	2020(Rs.)
Recurrent Grant	15,000,000	19,500,000.00
Self-Financing Activities-Net Value	94,376,105	73,984,929.51
All other Internal Income	51,624,845	4750257.80
Total	161,000,950	1,21,235,187.00

Table 20: Capital Payments in 2019 Vs 2020

Capital Payments	Government Grant		Generated Income		Total Payments	
	2019 (Rs)	2020 (Rs)	2019 (Rs)	2020 (Rs)	2020 (Rs)	2019 (Rs)

Building	10,000,000	-	18,748,173	680955	28,748,173	680955
Lab & teaching Equipment	10,000,000	2500000	39,484,521	18081084	49,484,521	2058,084
Office Equipment	--	-	1,599,416	1808744	1,599,416	1808744
Library Book				223406		223406
	--	--	161,505		161,505	
Sports Goods				46470		
Total	20,000,000	2500000	59,993,615	20794189	79,993,615	46470

Table 21: Recurrent Expenditure

Programme	Expenditure (Rs.)
Personal Emoluments –Academic	25347979
Personal Emoluments -Non Academic	31597950
Travelling Expenses	397000
Supplies	4861994
Maintenance Expenses	1712909
Contractual Services	6827087
Other Recurrent Expenses	18937333
Depreciation	338585834
Grand Total	128206573

Table 22: Financial Progress (Expenditure)

Subject	2020
Recurrent	100%
Capital	100%

Table 23: Financial Performance Analysis

Subject	Exp. Per Student Rs.
Recurrent Expenditure per student (RE)	95987.40
(RE/ No of Student)	

Table 24: Fund Allocation, Utilization and Management

	Allocation (Mn)	Received and Utilized (Mn)
Capital Grants	2.5	2.5
Recurrent Grants	19.5	19.5

Table 25: Research Grants Received (External Funds, 2016-2020)

Year	No. of Research Grants	Value (Rs. Mn)
2016	5	19040010.00
2017	8	19874125.00
2018	4	14001100.00
2019	6	10288860.00
2020	4	995,000.00

Table 26: Details of Projects Expenditure (Local Funded) Year 2020

Name and Details	Grant	Funding Agency	Total Cost Estimate Rs.
Prof. RMG Rajapakshe	6289	National Science Foundation	577 500.00
Dr. PG Manthilaka	6291	Texco International Pvt. Ltd	138000.00

Table 27: Details of Projects Expenditure (Foreign Funded) Year 2020

Name and Details	Grant	Funding Agency	Total Cost Estimate
Dr. R.S. Rajakaruna	6290	British Colonial Group,India	1000 USD

9. FAILURES AND JUSTIFICATIONS

The scheduled academic programmes for year 2020 could not been conducted on time due to pandemic situation in the country. Online lectures were delivered and end semester examinations were conducted adhering to Covid-19 prevention guidelines as remedial measures.

The PGIS is yet to receive approval for cadres which had already been requested from the Department of management Services. In efficient approval process of employment affects negatively for the smooth functioning of the institute.

10. FUTURE PLANS OF PGIS

- Development and Installation of Management Information System for registration process, document handling, instrument booking and data management
- Purchasing sophisticated major instruments/equipment to develop PGIS as a high-quality well-equipped research center
- Development of research material storage facility for laboratories to avoid delays in research activities and projects
- Mechanisms to promote degree programmes and other PGIS events (Social media, PGIS YouTube channel, media team and PGIS ambassadors to promote events among foreign institutes)

- Setting up career guidance and counseling mechanisms through workshops and possibly a center or office
- Development of existing laboratories to promote good research practices and research culture
- Implementation of new industrial outreach activities such as PGIS startup programme and R & D support for industries
- Awarding PGIS research grants
- Formulation and implementation of new degree programmes to meet with the current demand
- Introducing new conferences, workshops and awareness programmes with the latest topics in the world
- Appropriate strategies to be further implemented to protect and minimize the damage to the environment adhering sustainable development policies
- Attraction and registration of more international students to improve university ranking.

11. SUSTAINABLE DEVELOPMENT

11.1. Sustainable Development Programmes Implemented at the Postgraduate Institute of Science in 2020

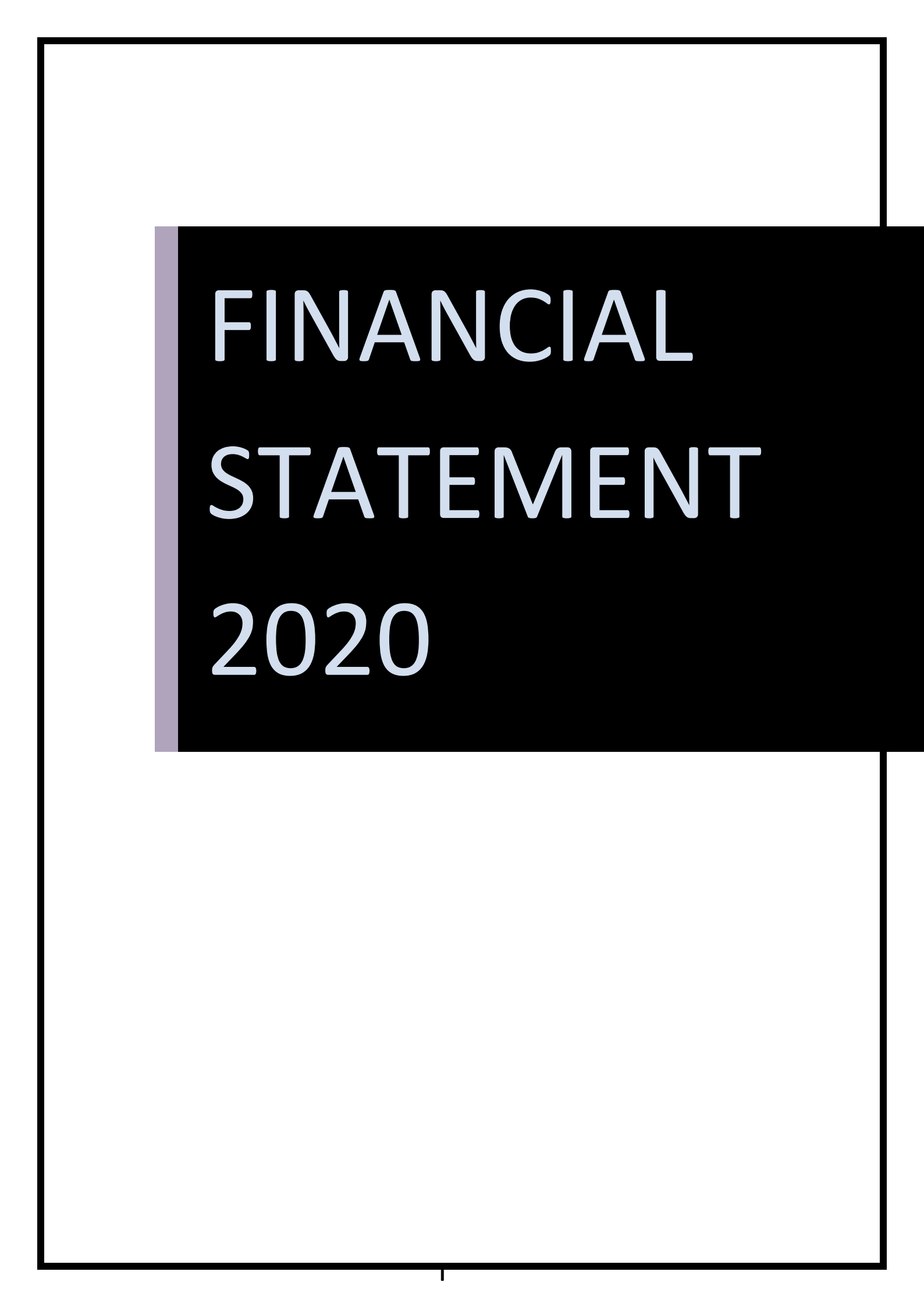
- Propose garbage segregation programme & introduce separate bins
- Handover segregated waste to authorized collectors
- Waste Paper and polythene were segregated and recycled.
- Cylinders of laboratories were located outside the building with proper attachments to the building. Leak free gas lines are provided under a colored lines into laboratories.
- Researchers are asked to use fume hoods for their solvent based activities to avoid chemical poisoning and hazards. Fume hoods are designed to release air pollutants with proper mechanism.
- Laboratory users have been instructed to wear lab coats and safety glasses during their sessions at the laboratory.
- Laboratory users have been instructed on safety and implemented safety rules
- Introduce autoclaving method for the disposal of bio hazardous waste
- Chemical wastes are directed to specially allocated sinks and the sinks are draining into special underground pits as liquid waste management plan
- Trees and decorator plants have been placed outside and inside the buildings as environmental protection green method
- Standard chemical storage cabinets have been used and chemical storing is done under standard conditions and locations
- Safety equipment including fire safety equipment and standard lab protecting have been located properly
- Exhauster fans have been placed inside laboratories and class rooms for air circulation

- Introduced paperless effective communication system. Email, MIS and newly introduced SMS system
- Promote efficient use of energy
 - Replace bulbs with Light-Emitting Diode (LED)
 - Introduce motion sensing bulbs
 - Introduce solar power plant to generate clean energy
 - Conducting capacity building programmes to promote the efficient use of energy

11.2. Sustainability Development Related Research Conducted During 2020

Name of the Student	Title of the Research
Prasanna, M G M	COMMUNITY STRUCTURE AND FUNCTION IN LAGOON FRINGING AND ESTUARINE MANGROVES FROM POTTUVIL TO OKANDA IN THE EAST COAST OF SRI LANKA
Naveendrakumar, G	HISTORICAL TRENDS IN AVERAGES AND EXTREMES OF RAINFALL, TEMPERATURE AND RUNOFF OF SRI LANKA
Jayawardhana, B A Y B	POTENTIAL USE OF MUNICIPAL SOLID WASTE DERIVED BIOCHAR FOR REMEDIATION OF VOLATILE ORGANIC COMPOUNDS IN LANDFILL LEACHATE
Rubasinghe, R T	DISTRIBUTION AND MOBILITY OF MAJOR AND TRACE ELEMENTS IN GROUNDWATER AND SOILS FROM DIFFERENT CLIMATIC ZONES OF SRI LANKA- IMPLICATION TO HUMAN HEALTH AND AGRICULTURE
Chathuranga, R A J	CHEMICAL ANALYSIS OF BULK DEPOSITION IN SELECTED LOCATIONS IN GAMPAHA DISTRICT
Rajiharan, R	A STUDY ON HEAVY METAL CONTAMINATION IN SELECTED MAN-MADE BRACKISH WATER AQUACULTURE SYSTEMS IN THE EASTERN PROVINCE
Atugoda, D R A M T R	MICROPLASTICS AS A VECTOR FOR TRANSPORTING CIPROFLOXACIN WATER AT DIFFERENT ENVIRONMENTAL CONDITIONS
Gunarathne, R M V N	HYDROMETALLURGICAL EXTRACTION OF HAZARDOUS HEAVY METALS FROM INDUSTRIAL SLUDGE
Rahiman, A A A	ENGINEERED CLAY -BIOCHAR COMPOSITE FOR TRAPPING ANTIBIOTIC CIPROFLOXACIN FROM AQUEOUS MEDIA
Ratnayake, R M K	ESTIMATING THE CARBON FOOTPRINT OF THE UNIVERSITY OF PERADENIYA FOR YEAR 2014
Hapuarachchi, H K I C	URBAN LAKE WATER QUALITY: A CASE STUDY IN KURUNEGALA LAKE
Weerasooriyagedara, M S	ADSORPTIVE REMOVAL OF ANTIBIOTIC OXYTETRACYCLINE HYDROCHLORIDE USING BIOCHAR MONTMORILLONITE CLAY COMPOSITE
Thalangama, T A K L	INVESTIGATION OF THE EFFECT OF PLANT GROWTH ON HEAVY METAL REMOVAL IN FLOATING MACROPHYTE SYSTEMS

Dhanapala, W A M N S	CONSERVATION IMPORTANCE OF FLORA IN TROPICAL LOWLAND WET EVERGREEN FOREST FRAGMENT AT HALGOLLA, SRI LANKA
Umasuthan, S	RELATIONSHIP OF WATER QUALITY TO AVIFAUNAL DIVERSITY IN SELECTED FRESHWATER BODIES IN THE KILINOCHCHI DISTRICT, SRI LANKA
Sivasingham, A	COMPARISON OF INSECT DIVERSITY ON SELECTED INVASIVE AND NATIVE PLANT SPECIES IN THE JAFFNA PENINSULA, SRI LANKA
Amandakoon, A M T I	COMPARATIVE STUDY ON DETERMINATION OF WATER QUALITY USING PHYSICOCHEMICAL PARAMETERS AND BENTHIC MACROINVERTEBRATES OF SARASAVI OYA, UNIVERSITY OF PERADENIYA, SRI LANKA
Weththasingha, D S M	DEVELOPING A COASTAL SEDIMENT DYNAMIC MODEL FOR SRI LANKA
Kosgahakumbura, K N M H H	IMPACTS OF ASSOCIATED ANIONS ON LEAD UPTAKE BY PISTIA STRATIOTES AND SALVINIA MOLESTA: A NEW PERSPECTIVE FOR PHYTOREMEDIATION
Withanage, A B N	MONITORING OF WATER QUALITY AND BACTERIOLOGICAL PARAMETERS IN THE RAHAS-ELLA CATCHMENT BEFORE AND AFTER WATER TREATMENT
Jayathilaka, M S	IMPACT OF LAWS AND REGULATION ON INDUSTRIES FOR WATER QUALITY VARIATION IN MAHA OYA



FINANCIAL STATEMENT 2020

POSTGRADUATE INSTITUTE OF SCIENCE

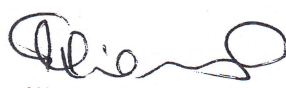
STATEMENT OF FINANCIAL POSITION
AS AT 31ST DECEMBER 2020

	Note	As at 31/12/2020 <u>Rs.</u>	As at 31/12/2019 <u>Rs.</u>
Current Assets			
Cash & Cash Equivalents	1	31,581,279	35,864,154
Receivable	2	37,545,648	40,087,645
Loan & advances to staff	3	1,285,858	1,580,895
Inventories	4	2,566,033	2,411,010
Total Current Assets		72,978,819	79,943,704
Non Current Assets			
Loan & advances to staff	3	2,988,656	2,615,205
Investments	5	429,868,066	410,650,564
Financial misappropriation-(2008-2016)		50,338,160	50,338,160
Intangible asset	6	233,751	247,551
Property, Plant & Equipments	7	225,919,717	241,260,174
Total Non Current Assets		709,348,350	705,111,654
Total Assets		782,327,168	785,055,358
LIABILITIES			
Current Liabilities			
Accrued expenses	8	8,350,767	9,356,853
Other payables	9	12,411,610	23,039,369
Refundable deposits	10	9,288,566	9,192,696
Differed Income		20,688,162	7,949,592
Provisions	11	8,887,549	8,209,497
Total Current Liabilities		59,626,655	57,748,005
Non Current Liabilities			
Provision for Gratuity	12	9,355,471	9,006,825
Funds	13	11,430,184	11,881,515
Refundable deposits	10	3,815,000	3,187,000
Total Non Current Liabilities		24,600,655	24,075,340
TOTAL LIABILITIES		84,227,310	81,823,346
NET ASSETS		698,099,859	703,232,013
EQUITY			
General Reserves		552,376,450	535,021,423
Restricted Funds	14	9,589,332	14,754,538
Capital Grant		121,343,714	137,149,617
Revaluation Reserve		14,790,363	16,306,435
TOTAL EQUITY		698,099,859	703,232,013

These financial statements are in compliance with the requirements of the University Act. No. 16 of 1978 and other statutory provisions.


A.M.R.A. Priyashantha.
Actg. Deputy Bursar.

The Board of Management is responsible for the preparation and presentation of these financial statements signed for and on behalf of the Board of Management


Prof. H.M.T. G.A. Pitawala
Director/PGIS

The Accounting Policies and Notes on pages 7 to 11 from an integral part of these Financial Statements.

27.02.2021

POSTGRADUATE INSTITUTE OF SCIENCE

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31ST DECEMBER 2020

Revenue	Note	<u>2020</u> <u>Rs.</u>	<u>2019</u> <u>Rs.</u>
Government Grant (Recurrent)		19,500,000	15,000,000
Examination Fee		1,502,000	1,456,500
Programme Fee		46,401,480	86,262,905
Registration Fee		4,300,250	4,217,000
Miscellaneous Income	15	4,924,126	2,887,091
Research Congress Income		1,355,875	1,571,800
Medical Fee		87,700	71,200
Services & Facilities Fee		271,060	133,300
Vehicle Hiring Charges		195,421	392,605
Library Tickets		927,000	757,500
Supervision Fee		689,000	656,000
Interest Income	16	29,717,172	31,727,071
Bench Fee		577,500	955,000
Exchange Gain/Loss		4,504,438	1,177,709
Amortization of Capital Grant	17	18,305,903	16,109,457
Research Grant Income		10,786,604	14,912,978
		<u>144,045,528</u>	<u>178,288,115</u>
Expenses			
Personal Emoluments	18	56,945,929	63,151,294
Travelling	19	335,489	805,036
Supplies & Consumables	20	4,861,994	5,100,147
Maintenance	21	1,712,909	2,348,768
Contractual Services	22	6,827,087	7,138,552
Other Expenses	23	18,937,333	28,114,334
Depreciation	24	38,585,834	30,825,832
		<u>128,206,573</u>	<u>137,483,964</u>
Net surplus/deficit for the year		15,838,955	40,804,151

POSTGRADUATE INSTITUTE OF SCIENCE
CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER 2020

	2020	2019
Cash Flows from Operating Activities		
Surplus from Ordinary Activities	15,838,955	40,804,151
Non - Cash movements		
Depreciation & Amortization	38,647,134	30,884,781
Amortization of capital grants	(18,305,903)	(16,109,457)
Interest income	(29,717,172)	(31,727,071)
Increase / Decrease Provision for Audit Fees	(338,790)	(362,363)
Increase / Decrease Provision for Gratuity	348,646	2,328,550
Increase / Decrease Provision for Security Charges	-	(256,620)
Increase / Decrease Provision for Visiting Lecturer Fees	1,016,843	(1,199,974)
Increase / Decrease Provision for cleaning services	-	(104,400)
Operating surplus before the working capital changes	7,489,713	24,257,597
Increase / Decrease Receivables	972,194	(12,351,893)
Increase / Decrease loans & advances	(78,414)	(154,445)
Increase / Decrease inventories	(155,025)	89,401
Increase / Decrease accrued expenses	1,945,348	1,644,358
Increase / Decrease payables	(10,749,632)	4,563,433
Increase / Decrease refundable deposits	723,870	1,689,500
Increase / Decrease deferred income	12,738,570	4,897,762
Net cash Flow from Operating Activities	12,886,624	24,635,713
Cash Flows from Investing Activities		
Purchase of Property Plant & Equipments	(26,260,173)	(79,865,739)
Purchase of Intangible assets	(47,500)	(180,000)
Investment in fixed Deposits	(238,962,982)	(31,104,723)
Withdrawal of fixed Deposits	219,745,480	19,141,239
Interest Income	31,255,057	32,242,264
Net cash Flow from Investing Activities	(14,270,118)	(59,766,959)
Cash Flows from Financing Activities		
Government capital Grants	2,500,000	20,000,000
Scholarship fund	33,281	103,728
Workshop & Event fund	-	(3,450)
Research Grant Receipts	9,806,795	12,505,622
Research Grant payments	(15,239,457)	(15,351,754)
Net Cash Flows from Financing Activities	(2,899,381)	17,254,146
Increase / Decrease in Cash & Cash Equivalent	(4,282,875)	(17,877,100)
Cash & Cash Equivalent at the Beginning of the Year	35,864,154	53,741,254
Cash & Cash Equivalent at the End of the Year	31,581,279	35,864,154

POSTGRADUATE INSTITUTE OF SCIENCE

**STATEMENT OF COMPARISON BUDGET & ACTUAL
FOR THE YEAR ENDED 31ST DECEMBER 2020**

Revenue	Note	<u>2020 Actual</u> Rs.	<u>2020 Budget</u> Rs.
Government Grant (Recurrent)		19,500,000	20,000,000
Programme Fee		1,502,000	1,745,000
Tuition Fee		46,401,480	56,300,000
Registration Fee		4,300,250	3,600,000
Miscellaneous Income	15	4,924,126	3,853,000
Rescon Income		1,355,875	1,375,000
Medical Fee		87,700	92,000
Services & Facilities Fee		271,060	350,000
Vehicle Hiring Charges		195,421	175,000
Library Tickets		927,000	920,000
Supervision Fee		689,000	620,000
Interest Income	16	29,717,172	27,442,000
Bench Fee		577,500	477,000
Exchange Gain/Loss		4,504,438	
Amortization of Capital Grant	17	18,305,903	
Research Grant Income		10,786,604	-
		<u>144,045,528</u>	<u>116,949,000</u>
Expenses			
Personal Emoluments	18	56,945,929	72,687,000
Travelling	19	335,489	2,410,000
Supplies & Consumables used	20	4,861,994	6,958,000
Maintenance	21	1,712,909	5,100,000
Contractual Services	22	6,827,087	10,205,000
Other Expenses	23	18,937,333	19,589,000
Depreciation	24	38,585,834	-
		<u>128,206,573</u>	<u>116,949,000</u>
Net surplus/deficit for the year		15,838,955	-

POSTGRADUATE INSTITUTE OF SCIENCE

**STATEMENT OF CHANGES IN NET ASSET/EQUITY
FOR THE YEAR ENDED 31ST DECEMBER 2020**

	Capital Grant	Revaluation Reserve	Retain Earnings	Total
Balance as at 01.01.2020	137,149,617	16,306,435	535,021,423	688,477,475
Surplus/Deficit for the period			15,838,955	15,838,955
Capital Grant received	2,500,000			2,500,000
Transfer to General Reserve		(1,516,072)	1,516,072	-
Amortization of Grant	(18,305,903)			(18,305,903)
				-
Balance as at 31 December 2020	121,343,714	14,790,363	552,376,450	688,510,527

Notes to the Final Statements

1.1.1 Reporting Entity

The Postgraduate Institute of Science (PGIS) was established in 1996 by an ordinance made by the University Grants Commission under section 18 with section 24 of the Universities Act No 16 of 1978.

1.1.2 Principal activities and nature of operations

The principal objective of the PGIS is providing, promoting developing higher education in science.

1.1.3 Basis of preparation

(a) Statements of Compliance

The Financial Statements comprise the statements of financial positions, statements of financial performance, statements of changes in equity, cash flow statements, notes to the financial statements and statement of comparison of budget and actual amounts.

The Financial Statements of the PGIS are prepared in conformity with Sri Lanka Public Sector Accounting Standards and relevant Sri Lanka Accounting standards on accrual basis of accounts. All accounting policies adopted by the PGIS are applied consistently with those of the previous year. Change in accounting policies have been disclosed separately.

(b) Basis of measurement

The Financial Statements of PGIS are prepared under the historical cost convention and do not take into account changes on money values, except where it is stated.

(c) Functional and presentation currency

The Financial Statements are presented in Sri Lankan Rupees, which is the institute functional and presentation currency.

(d) Going concern

The Financial Statements have been prepared on a going concern basis.

1.2 Assets and the basis of their valuation

1.2.1 Property, Plant & Equipment

Lands, Buildings, Laboratory and Teaching Equipment, Fixtures & Fittings, Library Books and Periodicals, Motor Vehicles, Sports goods and Other Assets include the items acquired out of government grant, internally generated funds, and donations.

a) Basis of Recognition and Measurement

Property, Plant and Equipment are recognized if it is probable that future Economic benefits associated with the item will flow to the entity and the cost of the items can be reliably measured.

Property, plant and equipments are recorded at cost less accumulated depreciation. The cost of property, plant and equipment is the cost of purchase or construction together with any incidental capital expenses there on.

b) Cost

The cost of property, plant and equipment comprises its purchase or construction cost and any directly attributable cost of bringing the assets working condition for its intended use.

c) Subsequent expenditure on existing Fixed Assets

Expenditure incurred on tangible fixed assets is charged to the Statement of Financial Performance in the period it is incurred, unless it meets one or the following criteria, in which case it is capitalized and depreciates on the relevant basis.

- Market value of fixed assets has subsequently increased.
- Asset capacity increase.
- Sustainable improvement in the quality of output or reduction in operating cost.
- Significant extension of the asset life beyond that confirmed by repair and maintenance.

d) Depreciation

Depreciation is recognized in the Statements of Financial Performance on a Straight-Line Method over the estimated useful life of Property, Plant and Equipment items from the date that they were made available for use. Lands are not depreciated. The estimated useful life periods are as follows.

Description	Estimated useful life period
Laboratory, teaching equipments	5Years
Motor vehicles	5 Years
Library Books and Periodicals	5 Years
Telephone	10 Years
Other Equipments	5 Years
Building	20Years
Sport Goods	5 Years

f) Land

The ownership of the Lands of the PGIS has not yet been transferred to the PGIS. Hence the value of the land not taken in to account. However it is noted that PGIS is attached to the university if Peradeniya (PGIS ordinance No 01 of 1996 dated 12th February 1996)

1.2.2 Inventories

Inventories are stated at the lower of cost and net realizable value. In general, cost is determined on a first in first out basis and includes expenditure incurred in acquiring the inventories and bringing them to their existing condition and location.

1.2.3 Intangible Asset

An intangible assets are recognized only when its cost can be measured reliably and it is probable that the expected future economic benefits are attributable to it will flow to the PGIS. The cost of the Blue lotus 360 (upgraded version) Accounting software amortize over 5 years period commencing from year 2019 as per the guide lines of Sri Lanka Public Sector Accounting standards 20 (SLPSAS 20). Computerized payroll is at the development stage at 31/12/2020. All the requirements have been demonstrated as per the SLPSAS 20 to identify such development cost to categorize under intangible assets. Amotization will be commenced once the software is available for use.

1.2.4 Receivables

Receivables are stated at the amounts they are estimated to be realized.

1.2.5 Cash & cash equivalents

Cash & cash equivalents comprise cash & saving deposits at bank.

The receipts & payments of the foreign currency of the RFC 2233593US\$ account, maintained at the Bank of Ceylon, Peradeniya is converted in to local currency at the Exchange rate existing on the dates of receipts and payments. Exchange gain/ loss has been calculated t by using the Central bank year end exchange rate.

1.2.6 Financial Misappropriation amount of Rs 50,338,160.18

As per the final forensic audit report issued by Auditor General Department on 26/07/2018, They identified the capital loss incurred due to obtaining money anomalously by cancelling fixed deposit by former Senior Assistant Bursar Mr W.M.M.S.M Iddawala as Rs 50,338,160.18 (Excluding redeposit amount of Rs 5,000,000.00) .Further in their report they identified that interest income of Rs 24,346,723 has been lost due to fraudulently withdrawn fixed deposit by Mr. W.M.M.S.M Iddawala from 14/03/2008 to 30/11/2017.

Criminal case is going on at Kandy Magistrate court under the case No MC/B/43167/17. Attorney General department has lodged a civil case (No DC/1196/20) against Mr W.M.M.S.M Iddawala to recover the losses. Our lawyers are in the view that there is a high possibility to recover the financial losses. Therefore financial misappropriation amount of Rs 50,338,160 is categorized under noncurrent assets.

1.3. Liabilities & Provisions

All known liabilities as at the balance sheet date are included in the financial statements and adequate provisions are made for liabilities which are known to exit but the amount of which cannot be determined accurately. Liabilities payable after one year from the balance sheet date are treated as noncurrent liabilities in the balance sheet.

Provision has been made in the financial statements for all unclaimed lecture fees, based on the respective budgets.

1.3.1 Provision for Gratuity

The provision for gratuity as at 31/12/2020 has been calculated by using Actuarial Valuation method prescribed under Sri Lanka public sector Accounting Standard 19 (Employee Benefits). Disclosures are made in the accounts in line with the requirements of the standard.

1.3.2 University Provident Fund (UPF) & University Pension Fund

The university and employees, contribute 15% or 7% and 10% respectively, on the salary of each employee to the University provident fund in line with the respective statutes and legislation in Sri Lanka and University Act. Also the university contributes 8% to the University Pension Fund in respect of pensionable employees.

1.3.3 Employees Trust Fund (ETF)

The university contributes 3% on the salary of each employee to the Employees Trust Fund.

1.3.4 Accounting for Grants

Grants that compensate the PGIS for expenses incurred are recognized as revenue in the income statement in the same period in which the expenses are recognized. Grant that compensate the cost of an asset is recognized in the income statement on a systematic basis over the useful life of the related asset as per the Sri Lanka Accounting Standard 20. (LKAS 20). The PGIS adopt income approach of the standard when identifying capital grants.

1.3.5 Research and Scholarships fund & Work shop & event fund

Research and development fund has been established by transferring the old research balances, and work shop and event fund has been created by transferring old unclaimed workshops balances, with the approval of the finance committee and the Board of Management in 2018.

1.4 Income Statement

1.4.1 Revenue Recognition

a) Interest Income

Interest income is recognized on accrual basis.

b) Programme fees income

Programme fees income is identified under accrual accounting principles. Accordingly programme fees which applicable to the current period are only identified as programme fees income for the period. Here adjustments were made in the accounts for unpaid programme fees (Receivables) and the excess course fees paid (Differed income) for the year ending 31/12/2020.

C. Recurrent Grants

Revenue from recurrent grants is recognized in the period in which grant is received.

d Research Grants Income & expenditure

The amount equal to recurrent research expenses has been identified as research grant income for the year.

e. Other Income

Other incomes are recognized on accrual basis.

f. Government Grants

Grants received from General Treasury of Sri Lanka comprised capital and recurrent grants. Grants that compensate the PGIS for expenses incurred are recognized as revenue in the income statement in the same period in which the expenses are recognized. Grant that compensate the institute for the Cost of an asset is recognized in the income statement on a systematic basis over the useful life of the related asset.

Total grant received for the year was Rs.22,000,000.00. This used as follows

Government Grant for Recurrent Expenditure	19,500,000.00
Capital grant for Acquisition of fixed assets	2,500,000.00
Total	22,000,000.00

g. Income from workshops, short courses, seminars etc

The administrative income from workshop, Short courses and seminars are disclosed under the miscellaneous income.

1.4.2 Expenditure

Expenditure has been recognized on accrual basis and charged to the revenue in ascertaining the income over expenditure.

2.0 Comparative Information

Comparatives have been restated in the financial statements where necessary in line with the requirements of Sri Lanka public Sector Accounting Standards.

3.0 Cash Flow Statement

The cash flow statement has been prepared using indirect method in line with the Sri Lanka public sector Accounting Standards 2 (SLPSAS 2)

Cash & cash equivalents

	Note	2020 Rs	2019 Rs
	1		
Cash at bank 0001273990			
Cash at bank 0001274002		433,796	117,922
Cash at bank 0571001911338034		1,349,801	1,824,590
Cash at bank 057100161338035		533,217	339,940
Cash at Bank A/C 81041788		-	71,810
US \$ Saving A/C		4,365,346	4,351,360
Saving A/C		12,251,518	17,271,673
		12,647,601	11,886,859

31,581,279**35,864,154****Receivables**

	2		
Receivable-Programme fee			
Accrued Interest		27,210,750	27,988,800
Vehicle hiring charges		10,011,781	11,549,664
Prepayments		-	98,963
Receivable deposit		96,904	249,586
Sundry debtors		60,000	2,500
Deposits for services		66,213	98,132
		100,000	100,000

37,545,648**40,087,645****Loans & advances to staff**

	3		
	Current	Non Current	Total
Distress loan	1,085,130	2,579,982	3,665,112
Computer loan	52,500	104,500	157,000
Vehicle loan	132,428	283,774	416,202
Staff loan	10,200	20,400	30,600
Special Advance	1,600		1,600
Festival Advance	4,000		4,000

1,285,858**2,988,656****4,274,514****4,196,100****Inventories / Stock**

	4		
Stationary			
Chemical stock		1,409,839	1,254,815
		1,156,194	1,156,194
		2,566,033	2,411,010

	Note	2020 Rs	2019 Rs
<u>Investments</u>	5		
Fixed deposits at BOC		60,412,424	41,119,288
Fixed deposits at NSB		51,349,100	2,200,000
Fixed deposit US \$ -BOC		172,478,986	162,730,623
Fixed deposits at People's Bank		27,798,101	204,600,653
Fixed deposits at State Mortgage Bank		117,829,454	-
		429,868,066	410,650,564
<u>Intangible Asset</u>	6		
Computer Software			
Cost:			
Opening Balance		306,500	256,500
Additions		47,500	50,000
Balance as at end of		354,000	306,500
Accumulated Amortization			
Opening Balance		58,949	-
Amortization Charge		61,300	58,949
Balance as at end of		120,249	58,949
Net Book Value		233,751	247,551

Property, plant & Equipment

(Note 7)

	Building	Telephone	Laboratory & Teaching Equip.	Library Books	Motor Vehicle	Office Equipments	Sport Goods	Rs. Total
Cost								
Opening Balance as at 1st January 2020	178,087,911	528,000	158,197,509	9,735,990	16,320,091	25,697,092	-	388,566,593
Adjustments/Disposals	(95,282)							(95,282)
During the year Additions	680,955		20,581,084	223,406	-	1,808,744	46,470	23,340,659
Closing Balance as at 31st Dec. 2020	178,673,585	528,000	178,778,593	9,959,396	16,320,091	27,505,835	46,470	411,811,970
Less Depreciation								
Opening balance as at 1st January 2020	33,916,777	413,824	75,566,433	9,101,955	16,095,860	12,211,572	-	147,306,419
Adjustments/Disposals								
During the year Additions	8,931,835	52,800	25,610,138	246,994	206,795	3,529,455	7,817	38,585,834
Accumulated depreciation as at 31st December 2020	42,848,612	466,624	101,176,571	9,348,949	16,302,654	15,741,027	7,817	185,892,253
Net Book Value as at 31st December 2020	135,824,973	61,376	77,602,022	610,447	17,437	11,764,808	38,653	225,919,717

	Notes	2020 Rs.	2019 Rs.
<u>Accrued expenses</u>	8		
Accrued expenses - Recurrent		8,350,767	6,405,419
Accrued expense - Capital		-	2,951,434
		<u>8,350,767</u>	<u>9,356,853</u>
<u>Payables</u>	9		
Stamp duty payables		15,775	12,325
Payee tax		55,415	463,419
Withholding tax		-	2,520
Book sale commission payable		10,623	10,623
Other Payable-Board of Study	9.1	1,482,264	1,149,624
Other Payable-Short Course & Workshop	9.2	7,738,301	15,019,917
Security Bond		13,804	12,460
Retention		3,095,430	6,368,481
		<u>12,411,610</u>	<u>23,039,369</u>
<u>Other Payable-Board of Study</u>	9.1		
Board of study in Chemical Sciences		8,100	8,100
Board of study in Earth Sciences		1,226,836	955,939
Board of Study in Enviromental Science		1,625	1,625
Board of study in Physics		11,740	11,740
Board of study in Plant Sciences		4,346	4,346
Board of study in Science Education		76,362	76,362
Board of study in Statistics Computer Science		101,293	39,550
Board of study in Zoological Sciences		51,962	51,962
		<u>1,482,264</u>	<u>1,149,624</u>

	Notes	2020	2019
	9.2	Rs.	Rs.
<u>Other Payable-Short Course , Workshop & Other</u>			
Postgraduate certificate course		232,472	206,250
04 W/S on Scientific Data Management		36,715	36,715
23rd Adv S/C on GIS application		208,756	342,160
72nd S/C on GIS application		561,097	654,097
74th S/C on GIS application		-	362,050
24th Advance S/C on GIS		993,097	993,097
W/S on effecet of climate change		4,724	4,724
25th Advance S/C on GIS		73,930	487,210
S/C on R & R Studio		10,463	10,463
73rd S/C on GIS Application		73,344	345,844
76th S/C on GIS Application		51,002	442,650
77 S/C on GIS & Application		12,604	890,030
S/C on ICTA		2,437,004	2,797,004
Tailor-Made S/C on GIS		150,000	150,000
78th S/C Gis and Application		14,074	14,074
26th advance S/C on GIS		181,597	197,301
DMC Training Programme		570,450	570,450
79th S/C on GIS Application		47,118	302,664
80th S/C on GIS Application		179,178	1,106,076
W/S on Air Quality Awareness & Mgt		2,037	2,037
ICMME-Conference		61,371	61,371
7th int,l Symposiuam W/S on Water Quality		-	1,048
108th S/C on GIS & Application		37,925	37,925
109th S/C on GIS & Application		175,000	175,000
111th S/C on GIS & Application		20,591	293,700
112th S/C on GIS & Application		401,362	157,739
113th S/C on GIS & Application		-	16,000
114th S/C on GIS & Application		26,717	222,545
115th S/C on GIS & Application		71,565	58,565
ICEMS-2020		73,738	972,050
S/C on Application GIS for Servey		35,000	35,000
Curriculum Dev.In Data Science		650,247	3,047,091
Bio Film & Bio Fertilizer		1,000	1,000
W/S on Report Writing		24,987	24,987
W/S on Scientific Writing		1,000	1,000
117th S/C on GIS & Application		9,669	-
118th S/C on GIS & Application		161,569	-
119th S/C on GIS & Application		87,507	-
121st S/C on GIS & Application		37,557	-
122nd S/C on GIS & Application		17,980	-
Conference on EMM-2020		3,000	-
W/S on Patent Prior Art S & D		855	-
		7,738,301	15,019,917

			2020 Rs.	2019 Rs.
	Notes 10			
Deposits	Current	Non current	Total	
Library deposits	5,164,614	2,082,000	7,246,614	6,850,614
Science deposits	4,043,358	1,733,000	5,776,358	5,452,358
Other deposits	78,464	-	78,464	74,594
Refundable deposit	2,130	-	2,130	2,130
	9,288,566	3,815,000	13,103,566	12,379,696
Provisions	11			
Provision for Audit fees			1,260,000	1,598,790
Provision for lecturer fees			7,627,549	6,610,706
			8,887,549	8,209,497
Retiring Gratiuty	12			
Balance as at 1st January			9,006,825	6,678,275
Charge for the Year	12.1		1,857,790	3,319,298
			10,864,615	9,997,573
Payments made during the year			(1,509,144)	(990,748)
Balance as at end of December			9,355,471	9,006,825
Charge for the Year	12.1			
Interest Cost			945,717	734,610
Current Service Cost			606,267	577,300
Net Actuarial (Gain)/Loss recognised immediately			305,806	2,007,388
Expenses recogniezed in the Income Statetment			1,857,790	3,319,298
Funds	13			
Scholarship Fund-Amarasinghe			1,291,877	1,258,597.15
Research & Scholarship Funds			7,771,002	8,038,458.47
Workshop & Event Fund			2,367,305	2,584,459.81
			11,430,184	11,881,515

Restricted Funds		Note	2020	2019
Grant No	Grantee Name	14	Rs	Rs
6074	Prof.K.Dhanayake		-	1,926,642
6142	Ms. Tilini Tilipan		144,496	144,496
6225	Prof.H.M.D.N.Priyantha		215,755	-
6230	Prof. I A U N Gunatilleke		97,569	97,569
6242	Prof.H.M.T.G.A.Pitawela		81,250	-
6250	Prof. Rohana Chandrajith		39	62,739
6252	Dr.Mrs.S.Puncharaja		-	72,557
6255 D	Prof.Weerasinghe		-	474,587
6259	Prof. H A H Jayasena		10,662	10,662
6260	Prof. M A K L Dissanayake		-	51,298
6263	Prof. J.G.S. Ranasinghe		92,387	92,387
6265	Prof.A.Wickramasinghe		602,913	1,094,313
6267	Dr.C.V.Hettiarachchi		95,522	95,522
6268	Prof.R.M.G.Rajapakse		-	1,418,297
6270	Dr.S.C.K.Rubasinghe		121,575	121,575
6271	Dr.K.M.G.G.Jayasooriya		5,465	5,465
6272	Dr.N.S.P.Kumburegama		-	4,020
6273	Prof.Rohana Chandrajith		174,502	560,872
6274	Dr.M.C.S Perera		387,451	872,346
6275	Prof.R.M.G.Rajapakse		507,736	808,601
6277	Ms.H.M.K.M.Premaratne		-	605,297
6278	Dr.Nanda Gunawardena		51,294	1,160,152
6279	Prof.H.M.S.P.Madawala		88,533	116,350
6280	Dr.C.L.Vithana		72,445	236,960
6281	Ms.P.M.Weeraratne		304,965	765,485
6282	Sisira Samaradiwakara		1,260,002	1,095,216
6283	Ms R W M G K Kapukotuwa		365,005	586,533
6284	Dr K G N Nanayakkara		1,785,932	1,785,932
6286	Dr K B S N Jinadasa		1,903,035	488,666
6287	Dr NPS Kumburegama		105,431	-
6288	Ms.M.M.K Galabadage		844,414	-
6289	Prof.R.M.G.Rajapakse - Covid		44,885	-
6290	Prof.R S Rajakaruna		119,820	-
6291	Dr.M.M.M.G.P.G.Manthilake		106,250	-
			9,589,332	14,754,538
Miscellaneous Income		15		
	Printing Income		139,902	369,201
	Administration Charges		1,513,792	751,304
	Certificate Fee		93,460	151,025
	Rooftop Reservation Income		-	5,000
	Application Processing Fee		1,852,750	1,216,500
	XRD Analysis Income		537,250	283,850
	Other Income		786,972	110,211
			4,924,126	2,887,091

		2020	2019
		Rs.	Rs.
<u>Interest Income</u>	Notes		
Fixed Deposit Interest	16	29,100,900	30,626,165
RFC Interest		300,744	320,304
Staff Loan Interest		165,108	150,067
Savings Interest		150,419	630,536
		29,717,172	31,727,071
<u>Amortization of Capital Grant</u>	17		
Building		4,970,103	2,780,672
Lab & Teaching Equipment		10,408,203	11,456,052
Library Book		193,516	243,220
Office Equipments		2,734,081	1,629,514
		18,305,903	16,109,457
General Administration and Staff Services			
Personal Emoluments			
Personal Emoluments (Academic)	18		
Salaries and Wages		4,392,150	2,369,991
U.P.F		1,137,325	669,297
Pension		366,482	224,957
E.T.F		300,762	178,851
Academic Allowance		5,346,898	3,404,752
Other Allowances		211,745	56,826
Additional Allowance		684,390	435,047
Gratuity		919,648	1,207,410
COL		286,335	186,948
Research Allowance		1,197,682	761,333
Visiting Lecture Fees		10,504,561	19,648,379
		25,347,979	29,143,792
Personal Emoluments (Non academic)	18		
Salaries and Wages		13,566,459	13,117,792
U.P.F		1,759,441	1,834,316
Pension		1,484,400	1,336,160
E.T.F		648,768	634,095
Overtime		1,412,691	2,192,958
Holiday Payments		265,536	411,175
Other Allowances		35,400	5,400
Monthly Compensation Allowance - MCA		5,608,559	5,446,828
Gratuity		938,142	2,111,888
Research Allowance		399,303	427,809
Additional Allowance 20%		2,492,693	2,420,812
Adjustment Allowance		-	143,786
Cost of Living		2,451,016	2,550,457
Staff Benefits		138,541	175,859
		31,200,950	32,809,338
Personal Emoluments (Casual)	18		
Casual Wages		397,000	1,198,165
		397,000	1,198,165
Travelling and Subsistence	19		
Travelling Expenses (Domestic)		335,489	755,036
Travelling Expenses (Foreign)		-	50,000
		335,489	805,036

		2020	2019
	Notes	Rs.	Rs.
Supplies	20		
Stationery & Office Requisites		1,457,501	2,349,188
Fuel & Lubricant		404,630	448,803
Uniform & Tailoring		21,061	32,178
Mechanical & Electrical		1,836,230	576,100
Chemicals & Glassware		1,142,572	1,693,878
		<u>4,861,994</u>	<u>5,100,147</u>
Maintenance	21		
Vehicles		680,749	423,988
Plant, Machinery & Equipments		704,244	1,626,726
Building & Structure		327,915	298,054
		<u>1,712,909</u>	<u>2,348,768</u>
Contractual Services	22		
Telecommunications		2,363,500	2,269,034
Postal Charges		314,728	250,466
Electricity		1,164,939	1,139,101
Security Services		1,465,895	1,351,847
Water Charges		39,762	22,286
Cleaning Services		1,478,263	2,105,818
		<u>6,827,087</u>	<u>7,138,552</u>
	23		
Other Recurrent Expenditure			
Printing and Advertising		761,002	928,794
Audit Fee		81,210	559,133
Special Services Council & Commit.		935,885	1,498,854
Special Services Professional & Other		104,004	163,716
Workshops & Seminars		400,922	877,783
Academic Research		-	105,999
Staff Development		39,945	172,220
Holiday Warrant		4,850	10,040
Bank Charges		189,914	160,923
Awards & Indemnities		25,000	180,000
Examination Expenses		3,028,443	4,800,899
Other - Newspaper, Magazines		589,833	519,913
Staff Welfare		120,000	190,000
Legal & Documentation		433,913	265,535
Convocation		-	500,000
PGIS Research Congress		1,304,208	2,178,999
Stamp Duty		24,100	29,600
Intangible Asset Amortize expenses		61,300	58,949
Insurance Scheme		46,200	-
Research Grant Expenditure		10,786,604	14,912,978
		<u>18,937,333</u>	<u>28,114,334</u>
Depreciation	24		
Building		8,931,835	6,731,510
Telephone		52,800	52,800
Lab & Teaching Equipment		25,610,138	20,145,925
Books and Periodicals		246,994	350,177
Office Equipment		3,529,455	2,372,793
Motor Vehicles		206,795	1,172,628
Sports Goods		7,817	-
		<u>38,585,834</u>	<u>30,825,832</u>
		<u>128,206,573</u>	<u>137,483,964</u>

POSTGRADUATE INSTITUTE OF SCIENCE

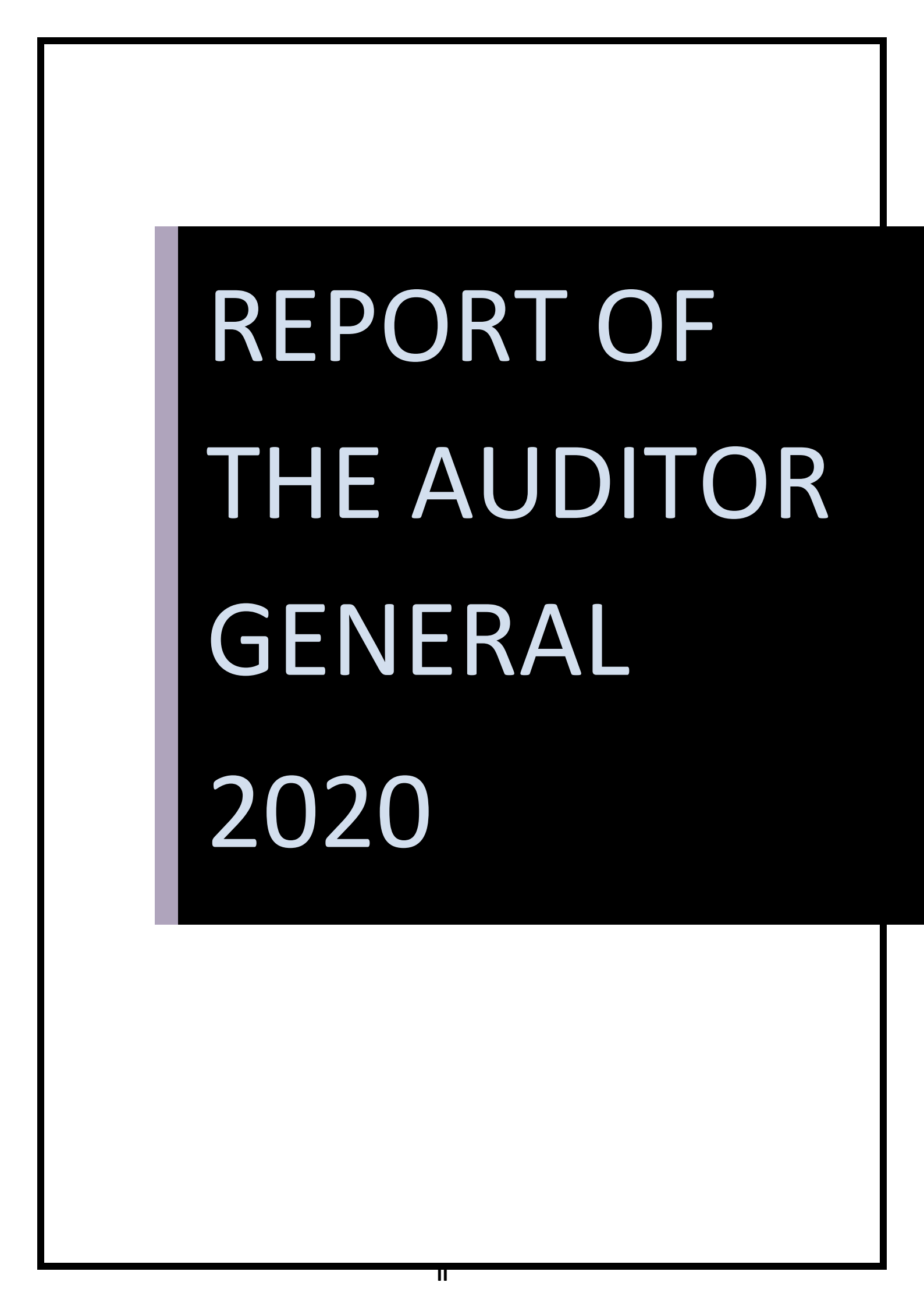
TRIAL BALANCE AS AT DECEMBER 2020

CODE	ACCOUNT NAME	DR	CR
00001	CASH BOOK A/C 0001273990	433,796	
00002	CASH BOOK A/C 0001274002	1,349,801	
00003	CASH BOOK A/C 057100191338034	533,217	
00007	CASH BOOK A/C NO 81041788	4,365,346	
05000	US \$ SAVING A/C	12,251,518	
10320	SAVING-BOC NO: 84023069	11,942,008	
10310	SAVING-P.AMARASINGHE SCH.FUND	705,593	
03000	ACCRUDE INCOME	10,011,781	
03200	RECEIVABLE-PROGRAMME FEE	27,210,750	
01001	SUNDRY DEBTORS	66,213	
01004	STOCK AS AT 31ST DECEMBER	2,566,033	
01006	PREPAYMENTS	96,904	
01009	RECEIVABLE-DEPOSIT	60,000	
02000	DISTRESS LOAN	3,665,112	
02002	COMPUTER LOAN	157,000	
02003	STAFF LOAN	30,600	
02004	VEHICLE LOAN	416,202	
02005	SPECIAL ADVANCE	1,600	
02006	FESTIVAL ADVANCE	4,000	
04000	DEPOSIT FOR SERVICES- FUEL	100,000	
10000	BUILDING	178,673,585	
10002	TELEPHONE	528,000	
10003	LAB & TEACHING EQUIPMENTS	178,778,593	
10004	LIBRARY BOOKS	9,959,396	
10005	MOTOR VEHICLES	16,320,091	
10006	OFFICE FURNITURE EQUIPMENTS	27,505,835	
10040	ACCOUNTING SOFTWARE	354,000	
01011	SPORTS GOODS	46,470	
10100	FIXED DEPOSIT - BOC	60,412,424	
10200	FIXED DEPOSITS - PEOPLES BANK	27,798,101	
10110	FIXED DEPOSIT - BOC - RFC	172,478,986	
10500	FIXED DEPOSIT- NSB	51,349,100	
10700	STATE MORTGAGE & INVESTMENT BANK	117,829,454	
10095	FINANCIAL MISAPPROPRIATION A/C	50,338,160	
60000	GOVERNMENT GRANT FOR RECCURANT		19,500,000
70010	EXAMINATION FEES		1,502,000
70020	TUTION FEES		45,869,980
70025	M.PHIL & PH.D TUTION FEE		531,500
70030	REGISTRATION FEE		4,300,250
70061	EXCHANGE GAIN /LOSS		4,504,438
70070	MISCELLANEOUS INCOME		786,972
70071	PRINTING INCOME		139,902
70072	ADMINISTRATION CHARGES		1,513,792
70073	CERTIFICATE FEE		93,460
70075	APPLICATION PROCESSING FEE		1,852,750
70076	RESCON INCOME		1,355,875
70077	XRD ANALYSIS INCOME		537,250
70090	MEDICAL FEE		87,700

CODE	ACCOUNT NAME	DR	CR
70190	SERVICES & FACILITIES FEE		271,060
70200	VEHICAL HIRING CHARGES		195,421
70250	LIBRARY TICKET		927,000
75000	INTEREST FROM SAVING A/C		150,419
75005	INTEREST ON RFC		300,744
75010	INTEREST INCOME FROM LOANS & ADVANCES		165,108
75060	INTEREST INCOME ON FD		29,100,900
75064	SUPERVISION FEE		689,000
75100	BENCH FEE		577,500
75103	REASEARCH GRANTS INCOME		10,786,604
75102	AMORTIZED INCOME		18,305,903
20000	GENERAL RESERVES		536,537,495
20500	RESEARCH & SCHOLARSHIP FUNDS		7,771,002
20600	WORKSHOPS & SHORT COURSE FUND		2,367,305
21000	CAPITAL GRANT - SPENT		121,343,714
21500	REVALUATION RESERVE		14,790,363
35720	PROVISION FOR GRATUITY		9,355,471
35000	PROVISION FOR DEPRECIATION - BUILDING		42,848,612
35200	PROVISION FOR DEPRECIATION - LAB TEACHING EQUIPMENT		101,176,571
35300	PROVISION FOR DEPRECIATION - LIBRARY BOOKS		9,348,949
35500	PROVISION FOR DEPRECIATION - OFFICE EQUIPMENT		15,741,027
35600	PROVISION FOR DEPRECIATION - TELEPHONE		466,624
35400	PROVISION FOR DEPRECIATION - MOTOR VEHICLES		16,302,654
35650	PROVISION FOR DEPRECIATION-SOFTWARE		120,249
35700	PROVISION FOR AUDIT FEES		1,260,000
35652	PROVISION FOR DEPRECIATION-SPORT GOODS		7,817
35760	PROVISION FOR LECTURE FEE		7,627,549
23020	BOARDS OF STUDY CHEMICAL SCIENCE		8,100
23030	BOARDS OF STUDY EARTH SCIENCE		1,226,836
23040	BOARDS OF STUDY ENVIRONMENTAL SCIENCE		1,625
23060	BOARDS OF STUDY PHYSICS		11,740
23070	BOARDS OF STUDY PLANT SCIENCE		4,346
23080	BOARDS OF STUDY SCIENCE EDUCATION		76,362
23090	BOARDS OF STUDY COMPUTER SCIENCE		101,293
23100	BOARDS OF STUDY ZOOLOGICAL SCIENCE		51,962
23110	5% RETENTION ON CAPITAL WORKS		3,095,430
23200	DIFFERED INCOME		20,688,162
30004	LIBRARY DEPOSIT		7,246,614
30005	SCIENCE DEPOSIT		5,776,358
30100	DEPOSITS		78,464
30200	SECURITY BOND		13,804
30250	REFUNDABLE DEPOSITS		2,130
30300	ACCRUED EXPENDITURE		8,350,767
30929	W/S ON SCIENTIFIC WRITING		1,000
30937	A S/C ON R & R STUDIO		10,463
30938	27TH ADVANCE S/C ON GIS (109)		175,000
31520	POSTGRAGUATE CERTIFICATE COURSE IN AD.ORG.CHEMISTRY-2		232,472
31950	STAMP DUTY		15,775
31954	PAYEE TAX		55,415
32027	BOOKS SALE		10,623
32082	PROF.P AMARASINGHE SCHOLARSHIP FUND		1,291,877

CODE	ACCOUNT NAME	DR	CR
32084	04 W/S ON SCIENTIFIC DATA MANAGEMENT		36,715
32087	23 ADV. S/C ON GIS & APPLICATION		208,756
32091	72 S/C ON GIS & APPLICATION		561,097
32096	24TH ADVANCE S/C ON GIS & APPLICATION		993,097
32098	W/S ON EFFECT OF CLIMATE CHANGE ON BIODIVERSITY		4,724
32099	25TH ADVANCE S/C ON GIS & APPLICATION		73,930
32100	73RD S/C ON GIS & APPLICATION		73,344
32101	76TH S/C ON GIS & APPLICATION		51,002
32102	77 S/C ON GIS & APPLICATION		12,604
32103	S/C ON ICTA		2,437,004
32104	TAILOR-MADE S/C ON GIS		150,000
32106	78TH S/C GIS AND APPLICATION		14,074
32107	26TH ADVANCE S/C ON GIS & APPLICATION		181,597
32108	DMC TRAINING PROGRAMME		570,450
32109	79TH S/C ON GIS & APPLICATION		47,118
32110	80TH S/C ON GIS & APPLICATION		179,178
32111	W/S ON AIR QUALITY AWARENESS & MGT		2,037
32112	ICMME-CONFERENCE		61,371
32114	82ND (108) S/C ON GIS & APPLICATION		37,925
32115	S/C ON APPLICATION OF GIS FOR SURVEYORS		35,000
6285	CURRICULUM DEV. IN DATA SCIENCE-PROF.PUSHPA & DR IMALKA		650,247
32117	W/S ON REPORT WITTING		24,987
32118	111TH S/C ON GIS & APPLICATION		20,591
32119	112TH S/C ON GIS & APPLICATION		401,362
32120	ICEMS-2020		73,738
32124	W/S ON BIOFILM,BIO FERTILIZER FOR A SUSTAINABLE FUTER		1,000
32125	114TH W/S ON GIS & APPLICATION		26,717
32126	115TH S/C ON GIS & APPLICATION		71,565
32128	W/S ON PATENT PRIOR ART S & D		855
32130	117TH S/C ON GIS & APPLICATION		9,669
32132	118TH S/C ON GIS & APPLICATION		161,569
32133	119TH S/C ON GIS & APPLICATION		87,507
32134	121ST S/C ON GIS & APPLICATION		37,557
32136	CONFERENCE ON EMM -2020		3,000
32137	122ND S/C ON GIS & APPLICATION		17,980
80501	TRAVELLING EXPENSES (DOMESTIC)	335,489	
80601	STATIONARY & OFFICE REQUISITES	1,457,501	
80602	FUELL & LUBRICANT	404,630	
80603	UNIFORM & TAILORING	21,061	
80604	MECHANICAL & ELECTRICAL GOODS	1,836,230	
80605	CHEMICAL & GLASSWARE	1,142,572	
80701	VEHICLES	680,749	
80702	PLANT , MACHENARY & EQUIPMENT	704,244	
80703	BUILDING & STRUCTURES	327,915	
80802	TELECOMMUNICATION	2,363,500	
80803	POSTAL CHARGES	314,728	
80804	ELECTRICITY	1,164,939	
80805	SECURITY SERIVES	1,465,895	
80806	WATER CHARGES	39,762	
80807	CLEANING SERVICES	1,478,263	
80810	PRINTING ADVERTISING ECT	761,002	

CODE	ACCOUNT NAME	DR	CR
80811	AUDIT FEES	81,210	
80812	LEAGAL & DOCUMENTATION CHARGES	433,913	
80902	SPECIAL SERVICES COUNCIL & COMMITIES	935,885	
80903	SPECIAL SERVICES - PROFESSIONAL & OTHER FEES	104,004	
80904	WORKSHOP & SEMINAS	400,922	
80906	STAFF DEVELOPMENT	39,945	
80908	HOLIDAY WARRENT & SEASON TICKETS	4,850	
80910	BANK CHARGES	189,914	
80911	AWARDS & INDEMNITIES	25,000	
80914	EXAMINATION EXPENSES	3,028,443	
80915	OTHER - NEWSPAPER MAGAZINES ECT	589,833	
80916	VISITING LECTURE FEES	10,504,561	
80926	PGIS INSURENCE SCHEME	46,200	
80930	STAFF WELFARE	120,000	
80935	PGIS RESEARCH CONGRESS	1,304,208	
84101	ACA-SALARIES & WAGES	4,392,150	
84102	ACA-U .P .F	1,137,325	
84103	ACA-PENSION	366,482	
84104	ACA-E. T. F	300,762	
84108	ACA-ACADEMIC ALLOWANCES	5,346,898	
84110	ACA-OTHER ALLOWANCE	211,745	
84112	ACA-ADDITIONAL ALL. 20%	684,390	
84114	ACA-GRATUITY	919,648	
84120	ACA-COL	286,335	
84121	ACA-RESEARCH ALLOWANCE 25%	1,197,682	
84201	NON-ACA-SALARIES	13,566,459	
84202	NON-ACA- U P F	1,759,441	
84203	NON-ACA PENTION	1,484,400	
84204	NON-ACA- E.T.F	648,768	
84208	NON- OVER TIME	1,412,691	
84209	NON-HOLIDAY PAYMENTS	265,536	
84210	NON- OTHER ALLOWANCE	35,400	
84212	NON-ACA-MCA.20%	5,608,559	
84214	GRATUITY	938,142	
84216	NON ACA. RESEARCH ALL. 25%	399,303	
84217	NON-ADDITIONAL ALLOWANCE	2,492,693	
84220	NON-COL	2,451,016	
84221	NON-STAFF BENIFIT	138,541	
84249	CASUAL VAGES	397,000	
90275	STAMP DUTY EXPENSE	24,100	
80941	RESEARCH GRANTS EXPENDITURE	10,786,604	
80950	DEPRECIATION - BUILDING	8,931,835	
80951	DEPRECIATION - TELEPHONE	52,800	
80953	DEPRECIATION - LAB & TEACHING EQUIP	25,610,138	
80954	DEPRECIATION - LIBRARY BOOKS	246,994	
80955	DEPRECIATION - OFFICE EQUIPMENTS	3,529,455	
80956	DEPRECIATION - MOTOR VEHICALS	206,795	
80957	DEPRECITION-SOFTWARE	61,300	
80958	DEPRECIATION-SPORT GOODS	7,817	
GRANT	RESTRICTED FUNDS		9,589,332
		1,096,546,244	1,096,546,244

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REPORT OF THE AUDITOR GENERAL 2020

The Director,
Postgraduate Institute of Science.

Report of the Auditor General on the Financial Statements and Other Legal and Regulatory Requirements of the Postgraduate Institute of Science for the year ended 31 December 2020 in terms of Section 12 of the National Audit Act, No. 19 of 2018.

1. Financial Statements

1.1 Qualified Opinion

The audit of financial statements of the Postgraduate Institute of Science for the year ended 31 December 2020 comprising the statement of Financial Position as at 31 December 2020 and the statement of financial performance, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with provisions in the National Audit Act No. 19 of 2018 and the Finance Act No.38 of 1971. My report to Parliament in pursuance of provisions in Article 154 (6) of the Constitution will be tabled in due course.

In my opinion, except for the effects of the matters described in the basis for Qualified Opinion section of my report, the accompanying financial statements give a true and fair view of the financial position of the Institute as at 31 December 2020 and of its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

1.2 Basis for Qualified Opinion

- (a) In terms of Paragraph 76 (c) of the Sri Lanka Public Sector Accounting Standard 01, although fixed deposits totaling Rs. 429,868,066 that is expected to be realized within twelve months after the reporting date should be stated in the statement of financial position under the current assets, it had been stated under non-current assets.
- (b) Although assets worth Rs. 15,116,057 revalued in the years 2010 and 2011 had been totally depreciated, no action had been taken to revalue those assets during the year under review as required by Paragraph 47 of the Sri Lanka Public Sector Accounting Standard 07.
- (c) Although a sum of Rs. 11,223,850 identified as receivable course fees income for the academic years 2016/2017 and 2017/2018 should be retrospectively adjusted, it had been brought to account as income for the year and as such, income of the year had been overstated by that amount.

I conducted my audit in accordance with Sri Lanka Auditing Standards (SLAuSs). My responsibilities, under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

1.3 Other Information Included in the Annual Report, 2020 of the Postgraduate Institute of Science

The other information means the information included in the 2020 Annual Report of the Postgraduate Institute of Science, which is expected to present to me after the date of this report, but not contained in the Financial Statements and my audit report thereon. Management is responsible for this other information.

My opinion on financial statements does not cover the other information and I do not express any assurance or opinion about such information.

My responsibility in connection with my audit of financial statements is to study the above identified other information and evaluate whether the other information is substantially mismatched with the financial statements or my knowledge gained in auditing or another manner.

In reading Annual Report,2020 of the Postgraduate Institute of Science, if I conclude that there are substantial misstatements, I should communicate that matter to those charged with the governance of the Institute to make relevant corrections. In case of misstatements further to be corrected, those will be incorporated in the report which I submit to Parliament in terms of Article 154 (6) of the Constitution in due course.

1.4 Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with Sri Lanka Public Sector Accounting Standards, and for such internal control as management determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the institute's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intend to liquidate the Institute or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Institute's financial reporting process.

As per Sub-section 16(1) of the National Audit Act No. 19 of 2018, the Institute is required to maintain proper books and records of all its income, expenditure, assets and liabilities, to enable annual and periodic financial statements to be prepared of the Institute.

1.5 Auditor's Responsibility for the Financial Statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sri Lanka Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Sri Lanka Auditing Standards, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institute's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. However, future events or conditions may cause the Institute to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

2. Report on Other Legal and Regulatory Requirements

2.1.1 National Audit Act, No. 19 of 2018 includes specific provisions for following requirements.

2.1.1. The financial statements presented by the Institute are consistent with the preceding year as per the requirement of section 6 (1) (d) (iii) of the National Audit Act, No. 19 of 2018.

2.1.2 The financial statements presented includes the recommendations made by me in the previous year as per the requirement of section 6 (1) (d) (iv) of the National Audit Act, No. 19 of 2018.

2.2 Based on the procedures performed and evidence obtained were limited to matters that are material, nothing has come to my attention;

2.2.1 to state that any member of the governing body has any direct or indirect interest in any contract entered into by the Institute which are out of the normal cause of business as per the requirement of section 12 (d) of the National Audit Act, No. 19 of 2018.

2.2.2 to state that the University has not complied with any applicable written law, general and special directions issued by the governing body of the Institute as per the requirement of section 12 (f) of the National Audit Act, No. 19 of 2018, except for the following observations.

Reference to Laws, Rules/ Directives	Description
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(a) Section 08 (i) of the Finance Act No.38 of 1971	Although a budget should be prepared and the approval of the Board of Governance should be taken 03 months prior to each financial year, action had not been taken accordingly.

(b) Financial Regulations of the Democratic
Socialist Republic of Sri Lanka

(b) Financial Regulation 757

Although a Board of Survey should be conducted each year and the relevant report should be submitted to the Auditor General before 31 March of the succeeding year, the Board of Survey report for the year 2019 had not been furnished even by the end of the year under review.

2.2.3 to state that the Institute has not performed according to its powers, functions and duties as per the requirement of section 12 (g) of the National Audit Act, No. 19 of 2018 except for the following observation.

Powers, Functions and Duties

Observation

Criteria 07 of the Manual on the Reviewing of Graduate Courses of the Sri Lanka Universities and Higher Education Institutions issued by the University Grants Commission in December 2015.

Although a specific method and standards to review process of planning of examinations conducted by the Institute, preparation of question papers, their improvement, paper marking, and grading should be formulated and approval of the Council and University Grants Commission should be obtained, only the approval of the Council had been obtained.

2.2.4 to state that the resources of the Institute had not been procured and utilized economically, efficiently and effectively within the time frames and in compliance with the applicable laws as per the requirement of section 12 (h) of the National Audit Act, No. 19 of 2018.

2.3 **Other Matters**

- (a) Without being spent funds for the relevant purpose, there was a balance of Rs. 7,771,002 as at 31 December of the year under review in the Fund established in 2018 for providing assistance for researches and scholarships of the Institute.
- (b) Eight Research Funds totalling Rs. 1.2,353,608 granted for research activities remained underutilized during the year 2020.
- (c) Despite the provision of funds annually by the General Treasury as recurrent and capital grants, money had been invested in 24 fixed deposits from the year 2002 to 2020 and there was a balance of Rs. 429,868,066 by 31 December of the year under review. Therefore, the management's attention should be focused to reduce the course fees and thereby give opportunities to more people to follow postgraduate courses.

W.P.C.Wickramaratne

Auditor General.

PGIS REPLY TO AUDIT OBSERVATIONS

1.2 Basis for Qualified Opinion

- (a) We invest money in fixed deposits with the objective of maintaining it over a long period. In accordance with the Internal Audit Circular 2019/04 issued by the University Grants Commission, we only invest funds annually in a state bank that offers the highest return (interest) on maturity. Accordingly, we have adopted an accounting policy of presenting Fixed Deposit Investment under the Non-Current Assets Heading in the Statement of Financial Position for a long period. For this purpose, we have taken into account the provisions of paragraph No. 77 of the Sri Lanka Public Sector Accounting Standards No. 1 (Submission of Financial Reports).

However, as has been pointed out by the audit, action will be taken to state the fixed deposit investments under non-current assets in the final financial statements for the year 2021.

- (b) As the country was closed for a few months due to the Covid epidemic situation in the country in the year 2020 (Lock Down) and the activities of the Institute were maintained to a minimum with a minimum number of employees for a few more months, this situation has arisen. However, action will be taken to pay attention in this regard in the future.
- (c) We have adopted the accounting policy relating to accounting for the course fee receivables from the year ending 31/12/2019. The situation pointed out by the audit has been created due to an error in the analysis of the course income due on 31/12/2020 in accounting for the above income.

However, necessary adjustments will be made to the comparative information for the year 2020 which will be submitted with the final accounts reports for the year 2021 in accordance with Sri Lanka Public Sector Accounting Standards No. 03 and action will be taken to correct the accounts reports in the future.

02 Report on other legal and regulatory requirements

- (a) Reference to Laws, Rules/Directive

We submit the Budget Estimates for the ensuing year to the University Grants Commission in July, four months before the presentation of the State Budget. The state budget is presented to Parliament in November in general and the University Grants Commission provides us with the recurrent and capital grants allocated to us in December. Taking those grants into account, we

prepare the budget for the coming year in December and obtain the approval of the Monetary Board and the approval of the Board of Management for the approved Monetary Board Reports. Accordingly, as pointed out by the audit, the preparation of the budget three months in advance cannot be done in practice.

The year 2020 is a special year and the government has provided provisions through two Vote on Accounts (one Vote on Account from January to April and one Vote on Accounts from October to December). According to those Vote on Accounts, the University Grants Commission had provided us with information on grants on 03/01/2020 and 02/09/2020. Accordingly, the situation pointed out by the audit has been created.

- (b) The survey of stores of the Institute for the year 2019 has been conducted at present.

2.2.4 The procurement activities of the Institute have been carried out in a planned manner in accordance with the 2020 Procurement Plan and Action Plan. However, the procurements that could not be carried out due to unavoidable reasons (eg Failure to call for bids and to hold Technical Evaluation Committees due to various restrictions imposed due to the COVID-19 epidemic) are due to be continued in 2021.

2.3 Other Matters

- (a) With the utilization of the balances pointed out by the audit, nearly Rs. 6 million (Rs. 500,000 per research project) has been awarded for 12 research projects and those research projects are currently in progress.
- (b) The current status of 8 underutilized research projects in 2020 as pointed out by the audit is as follows.

I. Ms. Tilini Tilipan - 144,496.00

The above balance has now been transferred to the Postgraduate Research Fund and the account has been settled subject to proper approval.

II. Prof. I A U N Gunathilake - 97,569.00

All the expenses have been settled and the account has been closed by now.

III. Prof. H A H Jayasena - 10,662.00

The above balance has been remitted to the National Science Foundation and the account has been closed.

IV. Prof. J G S Ranasinghe - 92,387.00

The above balance has been transferred to the Postgraduate Research Fund and the account has been settled subject to proper approval.

V. Dr. C V Hettiarachchi - 95,522.00

The above balance has been remitted to the National Science Foundation and the account has been closed.

VI. Dr. S C K Rubasinghe - 121,575.00

Out of the above balance, there is only a balance of 47,055 by now.

VII. Dr. K M G G Jayasooriya - 5,465.00

The above balance has been transferred to the Postgraduate Research Fund and the account has been closed subject to proper approval.

VIII. Dr. K G N Nanayakkara - 949,784.00

Out of the above balance, there is only a balance of 697,934 by now.

- (d) The Postgraduate Institute of Science is an institute that maintains mainly with the income generated by the Institute and the Treasury pays only a portion of the recurrent expenditure related to salaries and wages.
(Usually 50%.) The recurrent expenditure provided by the Treasury for the last 04 years is as follows.

2017	2018	2019	2020
Rs. 12,423,000	Rs. 10,000,000	Rs. 15,000,000	Rs. 19,500,000

The average annual recurrent expenditure of the Institute at present is around Rs. 90 million and all recurrent expenditure other than the recurrent expenditure incurred by the General Treasury is met using surplus course fees, interest income and other sources of income.

Similarly, the Treasury provides only a limited amount of capital to cover the annual capital expenditure and the balance is borne by the income earned by the Institute. The capital expenditure incurred through the income earned by the Institute for the last 04 years is as follows.

2017	2018	2019	2020
Rs. 15,179,813	Rs. 17,040,422	Rs. 59,648,321	Rs. 20,745,377

Accordingly, a large amount of the revenue we earn is annually borne by us for recurrent and capital expenditure of the Institute.

We would also like to point out that the course fees charged from the students are the minimum course fees that students can afford and cover the costs of the Institute.