

QIU SDG STEERING COMMITTEE REPORT 2019



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Introduction

Welcome to the first Quest International University (QIU) Sustainability Report 2019. This report charts out the setting up of a Sustainability Development Goals (SDG) committee.

QLU is committed to being a responsible corporate citizen and emphasises the importance in aligning itself to the United Nations' 17 Sustainable Development Goals. The University firmly believes that as a higher educational institution, it is of pivotal importance to integrate sustainability into our academic activities to ensure that our graduates are fully immersed in sustainability practices which they will reinforce in their future professions.

The University hosted Fulbright Specialist Dr. Nancy Landrum for a period of six weeks in June and July 2019. The purpose of the Fulbright visit was to help QIU integrate the United Nations' Sustainable Development Goals (SDGs) into the curriculum by achieving three objectives:



Conduct a workshop to train the academic staff on the importance of education for sustainable development.



Develop academic and training curricula to achieve goals as described.



Set up a Centre for Social Innovation to ensure the sustainability of our programmes, collaboration and networking with similar entities on a global platform.

Framework of QIU SDG Steering Committee

VISION

Fostering sustainable development values, principles and practices in society.

MISSION

To integrate sustainability in education processes.

To implement strategies to drive impactful and sustainable change.

To collaborate with all segments of society to achieve the Sustainable Development Goals.

CORE VALUES

Respect • Integrity • Inclusiveness • Empathy

ΜΟΤΤΟ

Quest for Sustainability

Clusters under the QIU **SDG Steering Committee**

In order to achieve QIU's SDGs, **four clusters** comprising of Education, Research, Operations and Leadership have been set up.



QI Group Social Impact and Sustainability (SIS) Strategy and Priorities

The QI Group of Companies, of which QIU is part of, are committed towards the SDGs through the formation of the Social Impact and Sustainability (SIS) Committee.

The SIS focuses on 3 main pillars with priorities set in place towards achieving each pillar.

SIS Pillars	SIS Priorities
Empowering People	 Building a healthy and sustainable workplace to continuously improve our people's health and well-being. Fostering a diverse and inclusive workforce culture that enables the participation and contribution of all people.
Transforming Communities	 Transforming communities through partnerships in the areas of Education for All, Gender Equality and Sustainable Community Development. Empowering responsible entrepreneurs to uplift themselves and rise above their limitations.
Safeguarding the Environment	 Strengthening our business practices to address how we engage with the environment. Advocating for a plant-based diet and banning single use plastic items in our events and offices worldwide.

Alignment of the QI Group Social Impact and Sustainability (SIS) Strategy with QIU SDGs

Working as one QI Group of companies, QIU has aligned its four SDG clusters of Education, Research, Operations and Leadership towards achieving the three SIS pillars.

SIS Pillars	QIU
 Empowering People Priorities: Building a healthy and sustainable workplace to continuously improve our people's health and well-being. Fostering a diverse and inclusive workforce culture that enables the participation and contribution of all people. 	EducationTo provide students with the knowledge, skills, and motivation to understand and address the challenges of the sustainable development goals and to empower and mobilize them for action.Image: Constant of the sustainable development goals.Image: Constant of the sustainable development goals.
 Transforming Communities Priorities: Transforming communities through partnerships in the areas of Education for All, Gender Equality and Sustainable Community Development. Empowering responsible entrepreneurs to uplift themselves and rise above their limitations. 	 Education To provide students with the knowledge, skills, and motivation to understand and address the challenges of the sustainable development goals and to empower and mobilise them for action. To research into the causes and craft solutions for the sustainable development goals. To align all University Policies, procedures and activities with the sustainable development goals. Research To research the causes and craft solutions for the sustainable development goals. Deadership To create awareness and seek opportunities to engage at a city, state, national and international level as an advocate for sustainable development.
 Safeguarding the Environment Priorities: Strengthening our business practices to address how we engage with the environment. Advocating for a plant-based diet and banning single use plastic items in our events and offices worldwide. 	ResearchTo research into the causes and craft solutions for the sustainable development goals.OperationsTo align all University Policies, procedures and activities with the sustainable development goals.

QIU Activities with that of QI Group Social Impact and Sustainability (SIS) Strategy

SIS Pillars	SDG Steering Committees	Some of the activities carried out at QIU that align with the SIS Pillars
Empowering People	Education Research	Food Bank at Faculty of Medicine; Reduce Food Waste; Sustainable Agri-Research Centre; Excess garden produce sent to social agencies (orphanages and senior citizen homes); Research on emotional/ mental well-being; Research to reduce vector-borne disease; No smoking policy.
Transforming Communities	Education Research Leadership	Students involved in projects on plant propagation and selling; Research on sustainable farming practices; Bioplastics research (waste to biopolymer; EcoBricks)
Transforming Communities	Education Research Operations Leadership	"Green the Earth – 1MillionTrees" project as part of the MPU Community Service subject; No Straw Campaign; Promote meatless diet; No smoking policy; Green Bonfire beach cleanup; Reduce use of printed documents



GOOD HEALTH

AND WELL-BEING



Research on

• Healthy, wholesome & affordable food.

- Emotional/mental well-being (stress, burnout, exhaustion, productivity).
- To reduce vector-borne disease.

Programmes in Medicine
Programmes in Pharmacy
Programmes in Psychology

- Encapsulation of natural drug using bioplastic microspheres as a matrix.
- · Bioplastic incorporated with the ethanol extract of medicinal plant.

· Teach students the importance of a healthy lifestyle & proper diet.

- Polyherbal formulation for liver protection/Regeneration (PL).
- Evaluation of antimicrobial and wound healing properties of bioactive fractions from the extract of *Passiflora sp.* Stem (SV).
- Evaluation of hepatoprotective activity on polyherbal formulation of *Eclipta* alba, *Phyllanthus amarus* and *Rauwolfia serpentine* (SV).
- Larvicidal activities of Areca catechu L. extracts against Aedes (Diptera:Culicidae).
- Biosynthesis of Azolla-nanosilver insecticides and its modes of action against Aedes sp. larvae and adult mosquitoes
- Solution for malnutrition issues in the Orang Asli community.

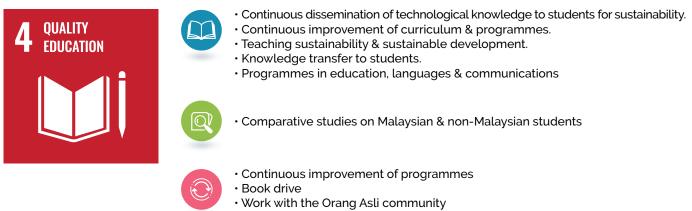






Research on

- The biosynthesis of silver nanoparticles using bacteria as an alternative to commercial antibiotic to inhibit antibiotic-resistant bacteria.
- The efficacy of topical ophthalmic preparations containing standardized extract of Orthosiphon stamineus (EOS) against retinal neovascularization secondary to diabetic retinopathy.
- A randomized, double-masked, exploratory study to evaluate safety, efficacy, tolerability, pharmacodynamics and pharmacokinetics of orally administered proprietary extract of Orthosiphon stamineus (NatureCeuticals Blood Cleanser TM (AUST L 281817)) with a 6 12 months follow up period in patients with non-proliferative diabetic retinopathy without center-involved diabetic macular edema.
- Prototype of STroke rehabilitation A-TeaM (STREAM) toolkit and modules: A collaborative physiotheraphy, malay Massage, medication management.
- Design and in-vitro characterization of personalised dosing by *Pulsatile Duacap*
- Surgical management of tongue cancer with adjuvant oral formulations of *Orthosiphon stamineus*; A clinical case report.
- Design and characterization of formulations containing standardized *Senna alata* leaf extract.
- The characterization and the significance of clinical Isolates of *Burkholderia pseudomallei* in the State of Perak, Malaysia.
- The development of an Integrated Medicine Management System.
- The effect of Traditional Malay Masssage together with Pharmacist. Intervention on Substance P, Inflammatory Mediators, Pain Intensity and Functional Outcome among Patients with Low Back Pain: A Pilot Randomized Controlled Trial.
- The development of immunochromatographic strip assay method for therapeutic drug monitoring of vancomycin in human plasma.
- Food bank at FoM
- Organic campus garden
- Promote healthy environment on campus
- Free eye checks
- Annual bonfire to foster campus unity
- Promote vegan diet
- No smoking policy

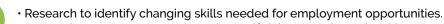


- Tuition/scholarships for underprivileged individuals.
- Educating staff about the SDGs & Sustainability.



• Working with the Perak Association for the Intellectually Disabled to improve special needs education and subsequently empower the community.





Research on a new perspective using Artificial Bees Colony Algorithm.

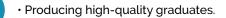
• Providing decent jobs and living wages.











- Research on plastic degrading bacteria/biodegradation.
- · Research at the garden on optimal growing methods.
- EcoBricks research
- · Comparative studies on Malaysian & non-Malaysian students.
- · Life cycle analysis for environmental impacts of industrial plants.
- Research on waste
- No straw campaign
 - No polystyrene
 - Reduced plastic use
 - Organic garden
 - Reusable containers for food
 - Reduced food waste
 - · Reuse of materials for packaging.
 - · Reduce need to print on paper for record-keeping.
 - Water conservation
 - Improve solar panel for future energy
 - Energy conservation (turn off lights, use LED lights, reduce air conditioner use)
 - Use of shared ride/e-hailing services
 - Campus recycling
 - Donation of excess produce



· Climate change & air pollution discussed in classes.

- · Research on abiotic stress on crop performance.
- Bioremediation research
- Staff motivation to research recycling, waste reduction & the environment.
- Research land impacts of climate change
- Phytoremediation research.
- Study on the role of WRKY transcription factor in response to abiotic stress.
- Research on the effect of anti sigma factor knockout using CRISPR-Cas9 in Ralstonia Picketti.
- Carpooling
- Support for on- & off-campus eco-campaigns
- Green Bonfire beach cleanup
- No straw campaign
- Turn off air-conditioning & lights when not in use
- Grow plants at home
- · Reduce use of printed documents.
- · Recycling & bins throughout campus.
- EcoRangers
- New green campus in development.
- EcoCampus certification

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World Cleanup Day

- Sustainable tourism research at marine park.
- Research on detection and identification of the types of microplastics in freshwater.
- Chemical waste is not discarded from labs into sinks.
- Recycle plastic
- · Research & life prediction analysis on maintenance of oil & gas piping.
- River clean-up
- No straw campaign
- No polystyrene
- Reduced plastic use
- Organic garden
- Reusable containers for food.
- Reduced food waste.
- Reuse of materials for packaging.



Teaching environmental ecology

- Sustainable tourism research
- Research on sustainable farming practices.
- Research on desertification.
- Research on bioremediation.
- Sustainable Tourism Seminar.
- Research on characterisation of PGPR related to *Leucaena leucocephala* (petai belalang).

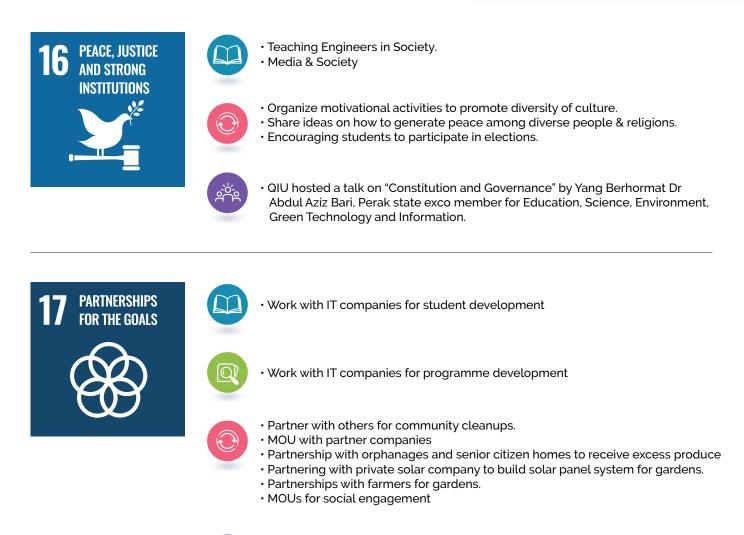
• "Green the Earth – 1Million Trees" project as part of MPU Community Service subject.

- Research on effects of Tridax procumbers on the growth, hematological and histopathological parameters of Tilapia (*Oreochromis niloticus*) (SV).
- Research on enhanced phyto-evaluation of Vetiver grass (*Vetiveria zizanioides* (Linn.) Nash in highly contaminated As-Cr metals soil conditions in Malaysia.



- No straw campaign.
- No polystyrene
- Reduced plastic use.
- Organic garden/no pesticides.
- Reusable containers for food & drink.
- Reduced food waste.
- Reuse of materials for packaging.
- $\boldsymbol{\cdot}$ World Cleanup Day
- No meat on campus.







• Signatory to the SDG Accord - the SDG Accord is a commitment to support the UN SDGs and embed them into our education, research, operations and leadership activities.

Planned Activities for 2020



Education Cluster:

- 8th Feb 2020- Thaipusam Food and Beverages Charity event: Food will be served using Biodegradable Lunch Box (a staff and student initiative).
- From the July 2020 intake, all Diploma and Undergraduate students will be required to take the Sustainable Development course as part of their MPU subject. Elements in the course will emphasise the SDGs and the implementation of the goals in actual events.



Research Cluster:

- Drafting the QIU SDG Policy.
- Campus Sustainability Conference 2020 co-organised with Adamson University, Manila
- Sustainable Tourism Conference 2021 co-organised by Universiti Malaysia Sabah / Fukushima University / QIU



Operations Cluster:

- Effective utilisation of resources Establishing baseline, compiling data on consumption of utilities and consumables, (eg: energy reduction, paper reduction, automation of processes).
- Setup a committee for implementation of sustainable practices at work place.
- Establishment of SOPs for identified processes as per Quality Standards. In progress of compiling the list of SOPs for key business practices.



Leadership Cluster

- SDex'20 (Sustainable Development Exhibition, 2020) Provide a platform for all SDG projects by individuals / teams to be heard by the various stakeholders. Raise awareness of the 17 SDGs.
- Sustainability Forum 2020 A frank discussion on sustainability initiatives. Sharing of what is being done by each stakeholder category. How individual efforts can be merged to create a more synergised, holistic effort.

The Committee will also be participating in the Times Higher Education Impact Ranking 2020, an initiative to recognise universities across the world for their social and economic impact, based on the United Nations' Sustainable Development Goals.

Pictures

23rd September | Green the Earth - 1 million Trees 2019 Phase 1 : Sungai Sayong, Kuala Kangsar (250 Trees)



6th October Green the Earth - 1 million Trees 2019 **Phase 2 :** along Sungai Kinta river bank, Lahat (100 Trees)









Appendix

List of on-going research projects in QUU



Dr. Rajiv Ravi

- Research Title :
- Superfood Spirulina Solution for malnutrition community for Orang Asli

Research Area : Nutritional Properties

B GOOD HEALTH AND WELL-BEING

Dr. Hema (Project Leader)

- Research Title :
- Encapsulation of natural drug using bioplastic microspheres as a matrix
- Bioplastic incorporated with the ethanol extract of medicinal plant

• Dr. Ashok

- Research Title :
- Polyherbal formulation for liver protection / Regeneration (PL)

Research Title :

- Evaluation of antimicrobial and wound healing properties of bioactive fractions from the extract of *Passiflora sp.* stem (SV)
- Evaluation of hepatoprotective activity on a polyherbal formulation of *Eclipta alba*, *Phyllanthus amarus* and *Rauwolfia serpentine* (SV)

Dr. Rajiv Ravi

Research Title :

- Larvicidal activities of Areca catechu L. extracts against Aedes (Diptera:Culicidae)
- Biosynthesis of Azolla-nanosilver insecticides and it's modes of action against Aedes sp. larvae and adult mosquitoes

Research Title :

• Superfood Spirulina Solution for malnutrition community for Orang Asli

Research Area :

Biopolymer and Drug Delivery

Research Area

Biomedical Science Application

Research Area :

Herbal Medicine

Research Area : Medical Entomology

Research Area : Nutritional Properties



• Dr. Hema (Project Leader) Research Title :

- Study on the biosynthesis of silver nanoparticles using bacteria as an alternative to commercial antibiotic to inhibit antibiotic maintenance.
- inhibit antibiotic-resistant bacteria

Prof. Dr. Aman

Research Title :

• The efficacy of topical ophthalmic preparations containing standardized extract of *Orthosiphon stamineus* (EOS) against retinal neovascularization secondary to diabetic retinopathy (SV)

Research Title :

• Medicine advertising: international survey and content analysis (SV)

Research Title :

• A Randomized, double-masked, exploratory study to evaluate safety, efficacy, tolerability, pharmacodynamics and pharmacokinetics of orally administered proprietary extract of *Orthosiphon stamineus* (NatureCeuticals Blood Cleanser TM (AUST L 281817)) with a 6 – 12 months follow up period in patients with non-proliferative diabetic retinopathy without center-involved diabetic macular edema (PL)

Research Title :

 Prototype of STroke rehabilitation A-TeaM (STREAM) toolkit and modules: A collaborative physiotheraphy, malay Massage, medication management (PL)

• Dr. Mahibub (Supervisor)

Research Title :

- Design and in-vitro characterization of personalised dosing by *Pulsatile Duacap*
- Surgical management of tongue cancer with adjuvant oral formulations of *Orthosiphon stamineus*; A clinical case report

Research Title :

 Design and characterization of formulations containing standardized *Senna alata* leaf extract

Research Area :

Microbiology and Biomedical

Research Area :

Neuropharmacology

Research Area :

Clinical Studies

Research Area :

Clinical Research

Research Area :

Healthcare and Medicine

Pharmaceutical Science

Research Area :

Pharmaceutical Formulation Research and Development



• Prof. Vijayalakshmi (Supervisor) Research Title :

 Characterization and the Significance of Clinical Isolates of *Burkholderia pseudomallei* in the State of Perak, Malaysia

Datuk Allan (Supervisor)

Research Title :

 Development of an Integrated Medicine Management System

Research Title :

• Effect of Traditional Malay Masssage together with Pharmacist Intervention on Substance P, Inflammatory Mediators, Pain Intensity and Functional Outcome among Patients with Low Back Pain: A Pilot Randomized Controlled Trial

• Dr. Vijay Kotra (Supervisor)

Research Title :

 Development of immunochromatographic strip assay method for therapeutic drug monitoring of vancomycin in human plasma Research Area : Health Informatics Research Area :

Medical Microbiology

Pharmacy Practice

Pharmaceutical Chemistry

• Dr. Nik Athirah (Project Leader)

Research Title :

• Detection and identification of the types of microplastic in freshwater

Research Area :

Environmental Technology

INDUSTRY, INNOVATION AND INFRASTRUCTURE



CLEAN WATER

AND SANITATION

Dr. Paran (Project Leader)

Research Title :

- Sustainable eco-friendly plastic sand bricks
- Dr. Nik Athirah (Project Leader)
 - Detection and identification of the types of microplastic in freshwater

Research Area : Environmental Technology





• Dr. Nurul Rawaida (Project Leader) Research Title :

 A new method based on deep learning for predictive maintenance of high voltage induction motor in equatorial climate zone

Dr Goh Khang Wen (Project Leader)

Research Title :

 New Perspective Using Artificial Bees Colony Algorithm Research Area

Technology and Engineering, Mechanical & Manufacturing

Research Area :

Social Sciences & Business (Finance)



Dr. Rajiv Ravi (Supervisor)

Research Title :

• Effects of Tridax procumbens on the growth, hematological and histopathological parameters of Tilapia (*Oreochromis niloticus*) (SV)

Research Area :	
Aquaculture	



Dr. Wendy Liu (Project Leader)

Research Title :

 Characterisation of PGPR related to Leucaena leucocephala (petai belalang)

• Dr. Kamariah (Supervisor)

Research Title :

• Study the role of WRKY transcription factor in response to abiotic stress

Research Title :

- The Effect of Anti Sigma Factor knockout using CRISPR-Cas9 in *Ralstonia Picketti*
- Dr. Ranjetta (Project Leader)

Research Title :

Micropropagation of asparagus

• Dr. Chuck (Project Leader)

Research Title :

• Enhanced phyto-evaluation of Vetiver grass (*Vetiveria zizanioides* (Linn.) Nash in highly contaminated As-Cr metals soil conditions in Malaysia Research Area

Agriculture

Research Area :

Plant Molecular Biology

Research Area : Molecular Biology

Research Area : Plant Tissue Culture

Research Area :

Technology and Engineering (Green Technology)



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