

Enhancing the academic climate and  
intellectual atmosphere of universities  
through global digital platform

Prof. Ranjith Senaratne  
Chairman  
National Science Foundation

# Rationale for establishing GDP

- Sri Lanka, even almost 75 years after independence remaining as a developing country
- Lower middle income country

Sri Lanka      \$ < 4,000 per capita income

Japan          > \$ 47,000

Singapore     > \$ 65,000

- There is a direct relationship between R&D expenditure and growth of GDP

## Investment in R & D

Country	R & D as a % of GDP
Israel	4.2
Korea	4.0
Japan	3.5
Singapore	2.1
India	0.8
Pakistan	0.3
Nepal	0.3
Sri Lanka	<b>0.11</b> <b>(LKR 16.67 Bn)</b>

(Source: UNESCO, World Bank)

## No. of R&D personnel per million of population (full-time man equivalent)

Country	No. per million
Israel	8250
Korea	7980
Singapore	6803
Japan	5331
Malaysia	2397
Pakistan	336
India	253
Sri Lanka	106 (1/80 <sup>th</sup> that of Israel)

(Source: UNESCO, World Bank)

## High-tech exports by different countries (World Bank, 2017 & 2018)

Country	% of high-tech exports
Malaysia	53
Singapore	52
Vietnam	40
South Korea	32
China	31
Thailand	23
India	9
Sri Lanka	<1

# Global Innovation Index: Where do we stand out of 131 countries

Country	2019	2020	2021
Singapore	08	08	08
Korea	11	10	05
Israel	10	13	15
Japan	15	18	13
Malaysia	35	33	36
Vietnam	42	42	44
India	48	48	46
Nepal	109	95	111
Sri Lanka	89	101	95
Pakistan	105	107	99
Bangladesh	116	116	116

(Source: WIPO)

## Low proportion of entrepreneurs

<b>Country</b>	<b>Entrepreneurs (as a % of population)</b>
Sri Lanka	2 (230,000)
China	7.5
Bangladesh	11.6
Vietnam	19.6
Thailand	27.5

# Sri Lankan expatriates: Untapped and untouched potential

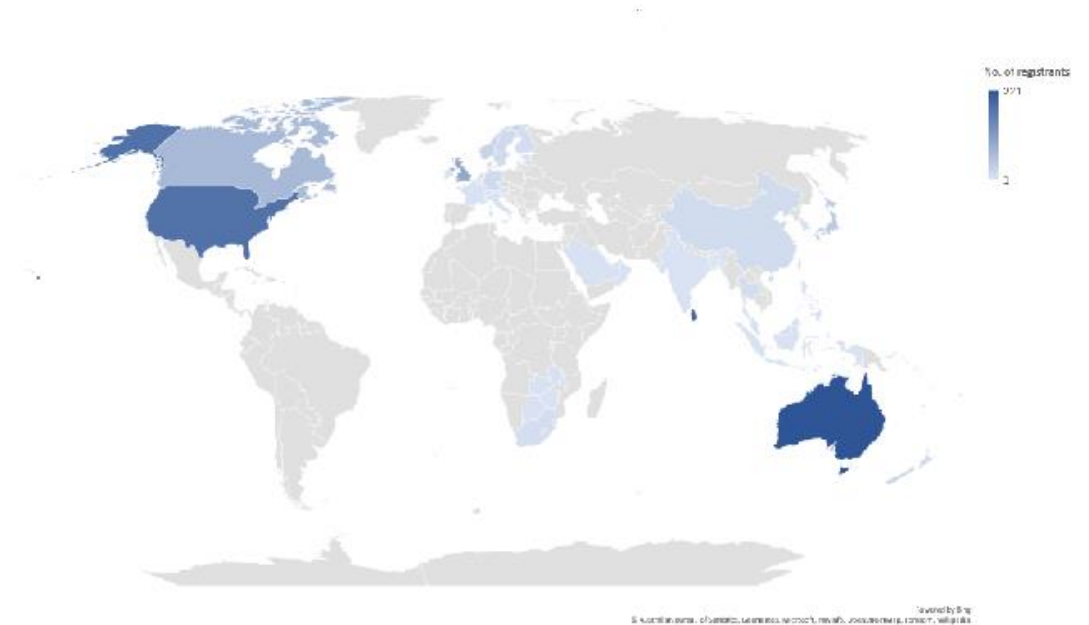
- There are around 3 m SL expatriates and emigrants in the world
- 15-25% are professionals depending on the country
- They are keen to contribute to development of the motherland
- Previous attempts to harness this potential not successful for the lack of a credible and pragmatic mechanism
- Hence, NSF constructed a **Global Digital Platform** with technical support from SLASSCOM to harness this potential for national development
- Now over 1,000 have registered with the GDP which constitutes an immense **intellectual and professional asset hitherto untapped**



- World is becoming increasingly interdependent and no country in the world can be independent
- There are global issues such as climate change, pandemics, cyber crimes, drug and arms trafficking, loss of biodiversity, global terrorism, air pollution, marine pollution etc.
- They need to be addressed through a trans-national and trans-disciplinary approach
- Therefore GDP through SL expats and their networks offers great promise in tackling global, regional and national issues

# Distribution of registrants

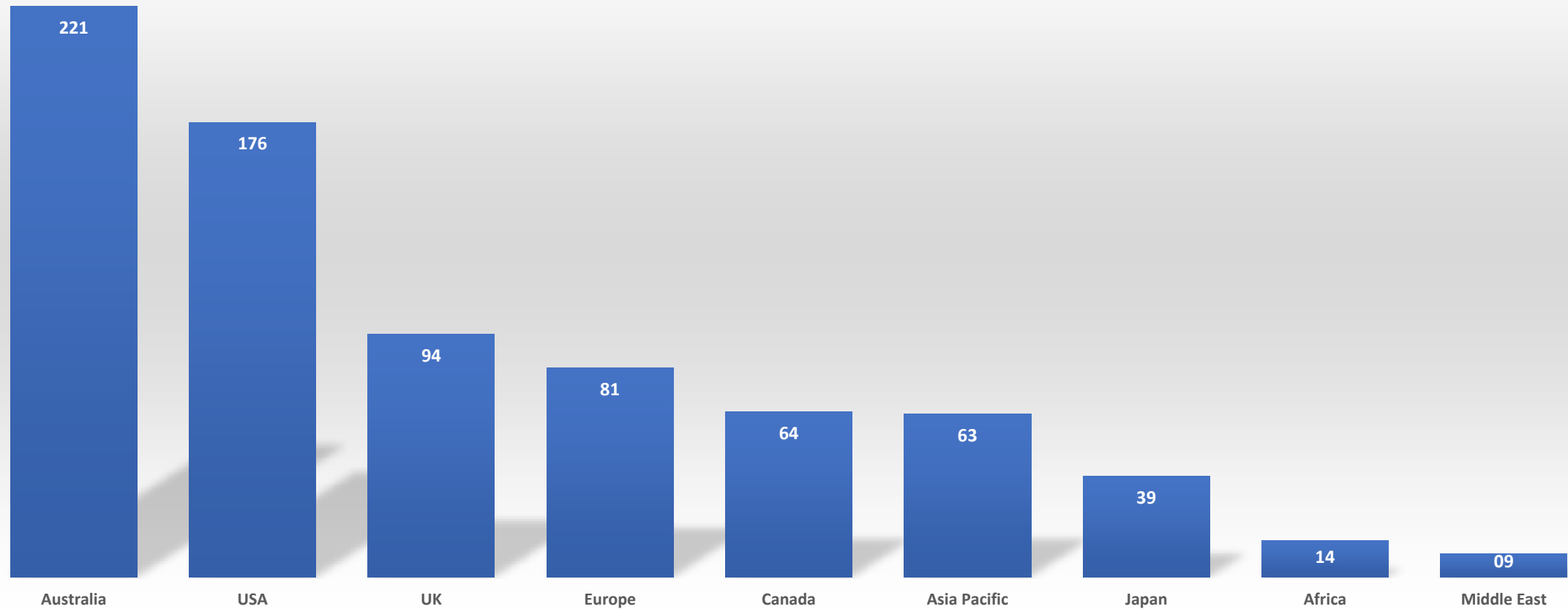
Country	No. of Registrants
Australia	221
United States of America	176
United Kingdom	94
Other	73
Canada	64
Japan	39
Norway	26
New Zealand	16
Singapore	14
Sweden	13
Germany	13
China	12



**> 1,000 Registrants from 40 countries**

# Summary of Registrants

Registrants of the NSF GDP



# Fields that can benefit from the Digital Platform

- Higher Education
- Science and Technology
- Industry through technology transfer and know-how
- Exports and business partnerships
- Foreign Direct Investment
- Tourism etc.

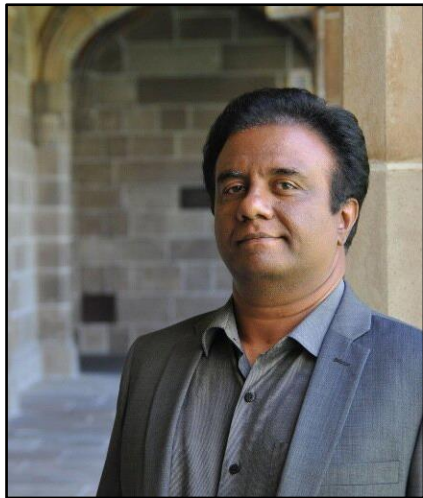
# How Universities and academics can benefit from the GDP?

- With the gradual shift of the fulcrum of economic power from the West to East, opportunities for postgraduate and pre-doc/post-doc studies
  - in Europe and N. America are shrinking and
  - in Asia, i.e. China, Japan, Korea and India, are growing
- This could result in a decline of academic diversity/ heterogeneity (**melting pot**) in HEIs
- As the diversity is the key to innovation, mother of innovation, this could affect the innovation potential of universities
- The GDP could contribute to containing/reversing this trend

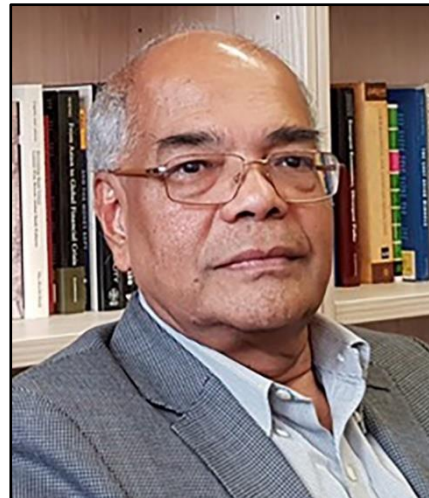
- Remote supervision of postgraduate students providing “global exposure”
- Conduct of advanced lectures/modules for PG students when dearth of senior staff , i.e. AI, 4IR etc.
- Conduct of collaborative research, conferences, webinars etc.
- Joint publications, i.e. COVID-19 volume
- Serving as members of editorial boards, reviewers etc.
- Short-term training/capacity building
- Travel calendar/“home coming” affording opportunities for discussion

# Sri Lankan Expatriates - Only the tip of the iceberg!

## Australia



**Prof. Saman Halgamuge**  
School of Electrical,  
Mechanical and  
Infrastructure Engineering,  
University of Melbourne,  
Australia.  
**Artificial Intelligence**



**Prof. Premachandra  
Athukorala**  
Professor of Economics  
and Fellow of the Academy  
of the Social Sciences of  
Australia, Australian  
National University.  
**Economics**



**Prof. Kanagarathnam  
Baskaran**  
Pro Vice Chancellor  
International Research  
Partnerships, Deakin  
University, Australia.  
**International Research  
Partnerships**



**Prof. Priyan Mendis**  
Professor of Civil  
Engineering, Director of  
Australian Research  
Council Centre for  
Prefabricated Structures,  
University of Melbourne,  
Australia.  
**Infrastructure Engineering**



**Prof. Chamindie  
Punyadheera**  
Associate Professor &  
Head, Saliva and Liquid  
Biopsy Translational  
Laboratory  
Queensland University of  
Technology  
**Biomedical Sciences**

## USA



**Dr Bandula Wijay**  
Ambassador for Science  
Technology and  
Innovation for Sri Lanka  
in the USA  
***Medical Instruments***



**Dr Sarath Gunapala**  
Director, Jet Propulsion  
Laboratory California  
Institute of Technology  
Pasadena, California, USA  
***Space Science***



**Prof. Sivagnanam  
Sivananthan**  
Director of Microphysics  
Laboratory University of  
Illinois, Chicago, USA  
***Renewable Energy***



**Dr Gayani Senevirathne**  
Harvard University, USA  
Winner of Helen Hay  
Whitney Fellowship 2022  
(Mostly awarded to a  
few of the well-  
recognized Nobel  
Laureates in the World)  
***Zoology and Molecular  
Biology***



**Prof. Tissa Illangasekera**  
AMX Distinguished Chair  
of Environmental Sciences,  
Colorado School of Mines,  
USA.  
***Civil and Environmental  
Engineering***



## Canada



**Prof. Dilantha Fernando**  
Dean – St Paul’s College,  
University of Manitoba,  
Canada.  
*Plant Pathology*



**Prof. Darshanie  
Kumaragamage**  
University of Winnipeg,  
Canada.  
*Environmental Studies  
and Sciences*



**Prof. Janaka Ruwanpura**  
Vice-Provost International  
and Professor  
University of Calgary,  
Canada.  
*Construction Engineering  
and Management*



**Prof. Wimal Rankaduwa**  
University of Prince  
Edward Island,  
Canada.  
**Economics**

## Europe



**Prof. Ravi Silva**

Distinguished Professor and the Director of the Advanced Technology Institute (ATI) at the University of Surrey, UK.

***Material Science and Nanotechnology***



**Prof. Nandana Rajatheva**

Faculty of Information Technology and Electrical Engineering, University of Oulu, Finland.

***Wireless Communications Engineering***



**Prof. Dilanthi Amaratunge**

Head of the Global Disaster Resilience Centre, School of Applied Sciences, University of Huddersfield, UK.

***Disaster Resilience***



**Prof. Shanthi Mendis**

A Senior Consultant in Global Health and Specialist Physician/Cardiologist and a former Senior Adviser World Health Organization, Geneva, Switzerland.

***Cardiology/Global Health***



**Dr Ravichandran Rajkumar**

Post-Doctoral Researcher  
Forschungszentrum Juelich GmbH  
Germany.

***Medical Imaging and signal processing***

## Japan



**Prof. Monte Cassim**  
President of the Akita  
International University  
***Health, Environment and Life  
Science***



**Prof. Keerthi Guruge**  
Head of the Toxicology Unit,  
National Institute of Animal  
Health (NARO) and Adjunct  
Professor, Osaka Prefecture  
University,  
Japan.  
***Environmental Chemistry  
and Ecotoxicology***



**Prof. Ananda Kumara**  
Former Dean, Faculty of  
Foreign Studies, Meijo  
University, Japan.  
***Foreign Studies***



**Prof. N.S. Cooray**  
Professor at Graduate School  
of International Relations,  
International University of  
Japan.  
***Economics***

## Asia Pacific



### **Prof. Malik Peiris**

Tam Wah-Ching Professor in  
Medical Science  
Professor, Chair of Virology,  
Division of Public Health  
Laboratory Sciences,  
The University of Hong Kong  
***Virology***



### **Dr Kavinda Gunasekera**

Associate Director of  
Geoinformatics Center,  
Asian Institute of Technology  
(AIT), Thailand.  
***Geoinformatics***



### **Prof. Suranga Nanayakkara**

Associate Professor  
Auckland Bioengineering  
Institute,  
University of Auckland (UoA),  
New Zealand.  
***Human computer interfaces  
and Assistive Augmentation***



### **Prof. Saman Bowatte**

Professor at College of  
Pastoral Agriculture Science  
and Technology, Lanzhou  
University, China  
***Plant soil microbe  
interactions***

# How Universities can strengthen the GDP?

- University staff are the principal beneficiary of the GDP
- They can strengthen it by registering with it and inviting their overseas colleagues and friends to join it.
- Providing info on analytical, testing and research equipment available at the university to the National Instrument Database (NID) of the NSF which will be integrated with the GDP along with the STMIS (> 6,000 R&D personnel)
- This will enable the prospective foreign collaborating scientists and supervisors to assess the human/intellectual capital and analytical and testing capabilities already available in Sri Lanka
- This will considerably reduce the potential cost of collaboration thereby increasing the prospects for joint research and co-supervision/remote supervision

If you wish to obtain any further information about the NSF Global Digital Platform or to establish contact from SL expatriate scientists, please feel free to contact:

**Dr J.G. Shantha Siri**

**Head, International Affairs Division, NSF**

E mail: [shantha@nsf.gov.lk](mailto:shantha@nsf.gov.lk)

Telephone: 0112209507, 0112696771, Ext 155

**Ms Thilinakumari Kandanamulla**

**Scientific Officer, International Affairs Division, NSF**

E mail: [thilina@nsf.gov.lk](mailto:thilina@nsf.gov.lk)

Telephone: 0112696771, Ext 156

THANK

YOU

