



# UoR HIGHLIGHTS

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## Triple Wins Strategy for the Next War in Sri Lanka

by Professor L.P. Jayatissa, Dean, Faculty of Graduate Studies, University of Ruhuna

After winning the 30 year of war against the terrorism, Sri Lanka has entered in to another battle that is to boost the development of the country. The country has to move forward for a sustainable development while protecting the victory against the terrorism. When the sustainability in the development is concerned, now, any country has a new obligation to be taken into consideration in developmental works; it is climatic concern. Investments on the development without climatic concerns could be a waste over the consequences of climate change.

More than two third of the industrial facilities & urbanised areas of the country, as well as tourist hotels and one third of the population, are located in the coastal zone that is around 25% of the total land area of the country. Therefore, it is obvious that much of the investments allocated for the development of the country will be pumped to the coastal zone. Conversely, the impact of the climate change could be more severe on the coastal zone than that on the inland areas.

Due to all these reasons, addressing the climate concerns when move forward with the economic development, is a must for Sri Lanka also. The proper and accepted mechanism to do this is called as 'Climate Compatible Development' (CCD) and now it is a concern not only

of developing countries but also of developed countries. The concept of CCD has been introduced recently as a strategy that supports Development which minimises the harm caused by climate impacts, while maximising the many human development opportunities presented by a low emissions, more resilient, future (Mitchell and Maxwell 2010). It is visualized in figure 1.

In functional terms, the CCD or this 'triple wins strategy' is to develop capacity and strategies for mitigation *i.e.* building the resilience of people & ecosystems in the face of unavoidable impacts from human-induced climate change, and adaptation, in parallel to the economic development of the country.

Eradication of the extreme poverty and hunger while ensuring environmental sustainability, gender equality, improved maternal health, equal opportunity for better education, reduced percentages of child mortality and non-communicable diseases etc. are the indicators of the economic development of a country. While achieving them, if the greenhouse gas emissions are reduced, the use of renewable energy & efficient use of conventional energy are promoted and carbon capture and sequestration through sinks are ensured, it can be decided that climate change mitigation also has been succeeded. In order to succeed the third win, the climate change adaptation, maximum of the following measures also should be achieved.

- Reduction of existing vulnerability for consequences of climate change, particularly among the poor, improving the equity. This should be extended to other biophysical systems also, without limiting to social systems.
- Active management of climate risk, particularly to reduce the future exposure to climate impacts and extreme events.
- Increase awareness of climate change

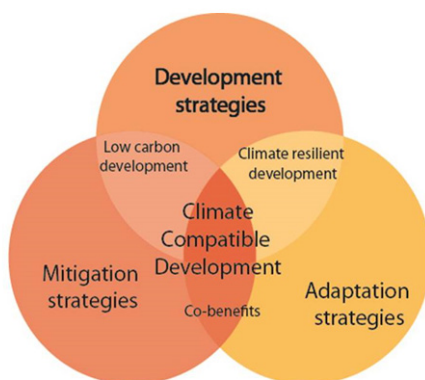


Figure 1: Conceptual Visualization of 'Climate Compatible Development (CCD)' as described in Mitchell and Maxwell (2010)

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through the generation of relevant information and the use & sharing of them at national & international level, to act in context of uncertainty.

- integration of the above adaptation actions across different partners and sectors at national & international level.

Climate change is not a myth anymore. Therefore the only solution is to adhere with the above strategy to reach the GGD.

### **Contribution by UoR**

Making CCD happen, however, is a significant challenge even for developed countries. Nevertheless it is not impossible if all the partners and all the

sectors join together while doing their duty in a proper way. In addition to the involvement in generating knowledge on climate change, adaptation & mitigation aspects through research, the University of Ruhuna as an individual institute, has already taken some promising steps towards a green environment. Several steps have been taken to reduce greenhouse gas emissions through waste recycling and minimizing the use of papers in documentations etc. and new approaches to reduce the electricity consumption is underway. The university is also planning to enter in to the 'Green metric ranking' process and it will further enhance the mitigation and adaptation processes.

## **ආරාධනා Live Stage Musical Performance**

"Aradhana" Live Stage Musical Performance was held on 21<sup>st</sup> Aug. 2014 at Faculty of Management and Finance. Two eminent musicians, Mr. Sunil Edirisinghe and Mrs. Nirosha Virajini, performed while nearly 3000 audience was present. Distinguished guests

including the Vice Chancellor and a team from the City FM also attended. The Circle of Accounting attached to the Dept. of Accounting and Finance organized the event with the collaboration of SLBC (City FM).



## **A Student of Faculty of Science Launched a Book**

A third-year student, Mr. Tharindu Jayasinghe, of Faculty of Science, launched his maiden novel, "Sangawunu Umaga", on 30<sup>th</sup> Sep. 2013 at the Alwatthagoda Pemadasa auditorium. Drawings for the novel were created by Ms. Anureka Senevirathne and the book

was published by Suriya Publishers.

The story is woven around some thrilling experiences of a group of youngsters who had to encounter in an exciting adventurous trip. Prof. Jayantha Amarasinghe delivered a special lecture making an assessment on the novel.

## **Awareness Program on Drought**

Awareness program on drought and pre preparation for it was conducted on 10<sup>th</sup> May 2014 by the Dept. of Agricultural Engineering in collaboration with Sri Lanka Water Partnership, Nilwala Area Water Partnership and NetWwater.

Main objective was to make aware public health inspectors, environment officers and *grama niladhaari*, on the drought and pre preparation methodology in Matara District. Programme was coordinated by Prof. C.M. Nawaratne of Department of Agricultural Engineering.

## **නාඩගම් නූර්ති ගී රසවින්දන**

Nadagam Noorthi Gee Rasawindana 2014 was steered in efficacious way at the auditorium of the Faculty of Humanities and Social Sciences on 21<sup>st</sup> August 2014 with the aim of recalling the memories of the traditional dramatic culture. The event was organized by the Cultural Center of the University with the participation of the Vice Chancellor, Senior Prof. Gamini Senanayake, as the Chief Guest.

## **RISK Award**

Projects run by Dept. of Agricultural Engineering together with Asian Disaster Preparedness Center titled "Mainstreaming climate information application for enhancement of ecosystems functions for DRR in Nilwala river basin, Sri Lanka" has been recognized by the RISK AWARD team as one of the best projects in 2014 out of 77 applications from 44 countries.



## Community Awareness Programme at Meddawaththa



Lankan Food, Healthy Food Habits and Aurvedic Medicine was held at Nagabodhi Viharaya, Meddawaththa, on 13<sup>th</sup> Sep. 2014. Associate Prof. E.P.S. Chandana of Dept. of Zoology and the students of Faculty of Science organized the event with the patronization of Vice Chancellor, Deputy Vice Chancellor, and Dean/Faculty of Science. Matara Police Station coordinated the participants in the area. Three physicians from Bandaranayake Memorial Ayurvedic Research Institute participated as resource persons and the event was funded by the Faculty of Science and Freelan Industries. More than hundred participants were benefited. The students prepared recently introduced ayurvedic gruel for all participants with a demonstration of the method of preparation. Participants were catered with a healthy traditional lunch prepared by the students.

## Establishment of RUSREC

Ruhuna Science Research Circle (RUSREC) was established for promoting research among undergraduates and academics of the Faculty of Science. Vice Chancellor of UoR delivered the first speech of RUSREC. Dean of the Faculty of Science, Senior Prof. W.G.D. Dharmarathna and Associate Prof. E.P.S. Chandana of Dept. of Zoology were appointed as patrons. Prof. W.T.S.D. Pemachandra and Prof. Kanthi Yapa were appointed as the Senior Treasurer and Senior Editor respectively. President, co-secretaries, junior treasurer and committee members were nominated from students.

## Ruhuna-Ryukyus Link Program

Practical Training on Tropical Agriculture with Special Reference to Sri Lanka was conducted by Department of Agricultural Engineering with the collaboration of Ryukyus University, Japan. This program was held from 15<sup>th</sup> Sep. to 2<sup>nd</sup> Oct. 2014 at the Dept. of Agricultural Engineering. Three Japanese students participated for this program in this year with the coordination of Dr. Jinendra Siriwijaya, Senior Lecturer, Department of Agricultural Engineering, Faculty of Agriculture.

## Traditional Soil Nourishing Formula



A self-motivated group of Level III students led by R.D. Dikmadugoda of Faculty of Science have successfully completed a field testing of a traditional soil nourishing formula in a paddy field nearby Wellamadama premises of UoR. Associate Prof. E.P.S. Chandana of Dept.

of Zoology supervised the project with the patronization of Dean of Faculty of Science and Vice Chancellor of UoR. After the completion of one season of cultivation, the preliminary analysis has shown that the traditional formula prepared by natural plant materials can enhance the yield while enhancing the quality of soil. The students engaged in this activity expect to continue this study for further analysis.

## Biodiversity Project in “Kerala Kele”

A research project on bird diversity in “Kerala Kele” wetland, Matara, was undertaken by Associate Professor E.P.S. Chandana and Professor N.J. de S. Amarasinghe of Department of Zoology of Faculty of Science with the sponsorship of Harischandra Mills (Pvt.) Ltd. Several undergraduates and demonstrators of Faculty of Science are conducting this study.



## Ruhuna International Science & Technology Conference (RISTCON) - 2015

RISTCON 2015 organized by the Faculty of Science will be held on 22nd and 23rd of January 2015. The RISTCON 2015 expects over 300 participants from academic/scientific/student communities from all over the world to share their research experiences. The Chief Guest of the conference will be Prof. Kshanika Hirimburegama, Chairperson of UGC, Sri Lanka. Keynote addresses will be delivered by Dr. Archana Sharma, CERN, Switzerland on “Searching for origins: The science and technology frontier at CERN” and Prof. Dilantha Fernando,

University of Manitoba, Canada on “Socioeconomic and Environmental Sustainability through Integrated Research for Development - A Sri Lankan Focus”.

Invited speeches will be delivered by Prof. Monte Cassim, Vice Chancellor, Ritsumeikan Trust, Japan on “Role of High Technology and Citizen Scientists in Conservation Biology of Tropical Ecosystems”, Prof. Naoki Hirotsu, Faculty of Life Sciences, Toyo University, Japan on “The genetic control of grain yield in rice”, Prof. Sarath Kotagama, Dept.

of Zoology, University of Colombo on “Integration of natural resources in development through research”, Dr. Saman Seneweera, University of Southern Queensland, Toowoomba, Australia on “Climate change threaten global food and nutrient security: Challenges and opportunities for increase micronutrient density in cereals”. Prof. Upul Wijayantha, Loughborough University, UK, and Dr. Wimal Ubhayasekera, Uppsala University, Sweden have also been invited to deliver special lectures.

## Workshop on Ecosystems Resilience in Changing Climate

Training workshop on “Ecosystem Resilience in Changing Climate” was conducted from 17-19<sup>th</sup> July 2014, in the Dept. of Agricultural Engineering. Professionals from Asian Disaster Preparedness Centre (ADPC) and academics from universities served as resource persons. Prof. K.D.N. Weerasinghe and Prof. Champa Navarathna coordinated the

workshop. The workshop aimed to enhance the existing knowledge and skills of officials and professionals on ecosystems management, and restoration of degraded ecosystems, as an appropriate action for Disaster Risk Reduction (DRR) in river deltas and estuaries within the DRR domain. Thus the program was designed to support administrators and professionals

working in ministries, local governing bodies, and public and private organizations to understand the existing ecosystems, threats incurred on them and adopt appropriate strategies and technologies to conserve and protect them to meet the existing and anticipated challenges of the climate change.

## Visit to Institutes of Chinese Academy of Sciences



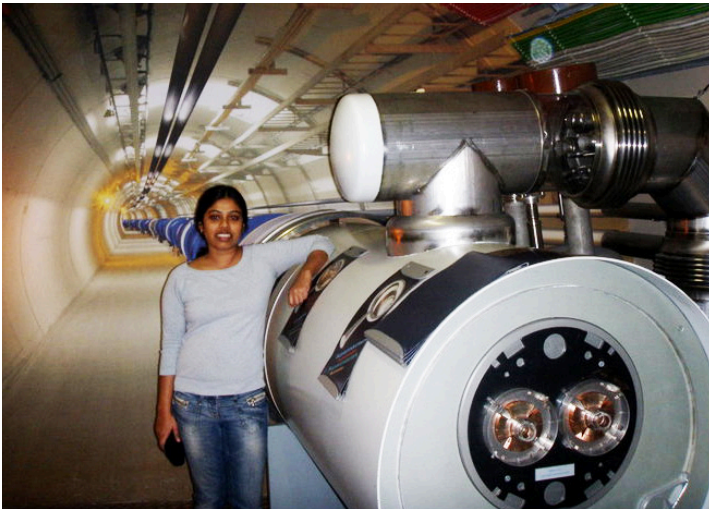
The Vice Chancellor of UoR, Prof. Gamini Senanayake and the Dean of Faculty of Fisheries and Marine Sciences & Technology, Prof. Tilak P.D. Gamage visited number of institutes under the Chinese Academy of Sciences in Oct. 2014.

On the invitation of Prof. Dongxiao Wang, Deputy Director of the South China Sea Institute of Oceanology (SCSIO) they visited State Key Laboratory of Tropical Oceanography, Shyian -I Research Vessel and Daya Bay Marine Biology Research Station of SCSIO, South China Botanical Garden, Shenzhen Institute of Advanced Technology and University of Chinese Academy of Sciences. This visit took place just before the visit of His Excellency the President of China, Xi Jinping, to Sri Lanka, as a goodwill gesture to the newly proposed China Sri Lanka Joint Center for Education and Research (CSL-CER).

CSL-CER is a part of the agreement signed between China and Sri Lanka during the recent visit of the President of China and will be located at the UoR.



## First Ph.D. from Sri Lanka based on Research at CERN Particle Collider



Ms. N.M. Wickramage, Dept. of Physics, successfully completed her Ph.D. based on research at the Central Muon Solenoid experiment at the European Organization for Nuclear Research (CERN) LHC (Large Hadron Collider) in Geneva, Switzerland. She received the Ph.D. degree from University of Ruhuna, which is the first such Ph.D. from a Sri Lankan University.

This collaboration has been initiated by Prof. W.G.D. Dharmarathna through Tata Institute of Fundamental Research (TIFR). Her thesis has been supervised by Prof. W.G.D. Dharmarathna, Prof. Kajari Mazumdar (TIFR), Dr. Archana Sharma (CERN), Prof. Harrison Prosper (Florida State University), Prof. Slawomir Tkaczyk (CERN). She has been able to work on a hardware component of the detector as well as analysis of data collected through last two years.

## Appointment of Adjunct Professor

Prof. Dongxiao Wang of South China Sea Institute of Oceanology (SCSIO) of Chinese Academy of Sciences (CAS) was appointed as an Adjunct Professor of the Dept. of Oceanography and Marine Geology of Faculty of Fisheries and Marine Sciences & Technology.

He is an eminent scientist in physical oceanography of the State Key Laboratory of Tropical Oceanography and Head of the Physical Oceanography Division of SCSIO. He is serving as an Editorial Board member for ten international journals. Based on the contribution made to science, Prof. Wang has been among the best fifty scientists in China.

Under his leadership, SCSIO signed four MoUs with the UoR for the establishment of an automated weather station, establishment of a joint observatory for wave and tidal measurements and Research Centre of Tropical Oceanography, and the establishment of China-Sri Lanka Joint Centre for Education and Research.



## Our Ocean Conference

The Dean of the Faculty of Fisheries and Marine Sciences & Technology, Prof. Tilak P.D. Gamage participated in the Our Ocean Conference organized by the Department of State, USA in Washington DC, in July 2014.

This conference was an opportunity gather lessons learned by experts, practitioners, advocates, lawmakers, and international ocean & foreign policy communities and to share the best science, offer unique perspectives, and demonstrate effective actions.

Following photograph shows a moment shared by the two Sri Lankan representatives, Prof. Tilak P.D. Gamage and Dr. S.G. Samarasundara, the Chairman of the National Aquatic Resources Research and Development Agency (NARA) with the Secretary of State John Kerry at the banquet hosted by the Secretary.





## China Sri Lanka Joint Center for Education and Research (CSL-CER)

Faculty of Fisheries and Marine Sciences & Technology (FMST) and South China Sea Institute of Oceanology (SCSIO) of Chinese Academy of Sciences (CAS) engaged to establish a China-Sri Lanka Joint Center for Research and Education. In this endeavour, the two parties signed a MoU on 16<sup>th</sup> Sep. 2014 at The Kingsbury Hotel with the participation of high level delegation from both China and Sri Lanka.

The MoU was signed by Prof. Wang Dongxiao, Deputy Director of SCSIO and Prof. Gamini Senanayake, the Vice Chancellor of UoR representing both parties while this event was conducted by Prof. Tilak P.D. Gamage, the Dean of the Faculty of FMST.

The delegation from China was represented by Professor Bai Chunli, the President of CAS, Prof. Tan Tieniu, Deputy Secretary-General of CAS, Professor Wu Yueliang, Vice President of UCAS, Mr. Qiu Huasheng, Deputy Director-General of Bureau of International Cooperation (BIC) of CAS, Mr. Fang Qiang Division Director of Asian and African Affairs, BIC of CAS, Professor Wang Dongxiao, Deputy Director of SCSIO of CAS, Dr. Tong Jingquan, Division Director of Research and Planning, SCSIO of CAS and Dr. Zhou Fenghua Research Scientist, SCSIO of CAS.

The delegation from Sri Lanka included Hon. S.B. Dissasayake, Minister of Higher Education, Hon. Susil Premjayantha, Minister of Environment and Renewable

Energy, Mr. B.M.U.D. Basnayake, Secretary, Ministry of Environment and Renewable Energy, Mr. T.N. Wijegunawardane, Chairman, Marine Environment Protection Authority, Prof. Kshanika Hirimburegama, Chairperson of UGC, Prof. Ranjith Seneratne, Vice Chairman of UGC, Prof. Gamini Senanayake, Vice-Chancellor of UoR, Dr. Nayana Alagiyawanna, Deputy Vice Chancellor of UoR, Prof. W.G.D. Darmarathne, Prof. L.P. Jayatissa, Prof. Subasinghe, Deans of Faculties of UoR, Dr. P.B. Terney Pradeep Kumara, General Manager of MEPA and Mrs. Senani Kalugama, Registrar of UoR and Mrs. Thanuja Pathirana, Assistant Registrar of the FMST.



## MoST China Visited University of Ruhuna

A delegation from Ministry of Science and Technology (MoST) of China visited UoR on 16<sup>th</sup> Oct. 2014. The objective was to identify research needs to be addressed under the MoU signed with Sri Lanka in conjunction with the visit of the President of China. The delegation was led by Mr. Chen Linhao, Deputy Director, Dept. of International Cooperation of MoST. Other members were Mr. Chen

Hongsheng, Director, Miss. Cheng Dan Project Officer, Mr. Teng Hongsheng, Deputy Director, Division of Asian/African and Commonwealth Independent States Affairs, China Science and Technology Exchange Center of MoST.

The Vice Chancellor, Deputy Vice Chancellor and all Deans of the Faculties attended the meeting with the delegation.



## UoR Wins IESL ANTON Award

Institution of Engineers Sri Lanka (IESL) ANTON Award for the Best Technical Paper on “Eco Friendly Water Infrastructure for Sustainable Development and Management Experiences gained from Integrated Water Resources Development and Management in Sri Lanka” of Session 2013 / 2014 Competition was received by Dr. (Mrs.) T.N. Wickramaarachchi, Dept. of Civil and Environmental Engineering for the technical paper titled “Projecting turbidity levels in future river flow: A mathematical modeling approach”, first authored by her and presented by her at the above competition.

## Best Paper Award –SLGS

Award for the best undergraduate project in Geotechnical Engineering from among Sri Lankan Universities in 2013 was won by W.G.P. Kumari and S.K.E. Sanjaya of the Dept. of Civil and Environmental Engineering, UoR at the Sri Lanka Geotechnical Society (SLGS) “Project Day Competition” held at University of Peradeniya. The title of the paper was “Selection of suitable materials for final cover of an Engineered Landfill in dry zone of Sri Lanka”. This Undergraduate project was supervised by Dr. N.H. Priyankara and Dr. A.M.N. Alagiyawanna. This is the consecutive second time that this award was won by the graduates of UoR.

## PATW 2014 - Best Paper Award

Dept. of Electrical and Information Engineering students, M.P. Chandimal, H.P.A. Chandrasiri, T.P.C. Madusha and P.G.G.N. Wickramasinghe won the Institution of Engineering and Technology (IET) Present Around The World (PATW) 2014-Sri Lanka Best Paper Award for their paper titled “Underwater Remotely Operated Vehicle”. The World IET PATW Competition was held at IIT Delhi, India on 6<sup>th</sup> Sep. 2014.

The paper was based on the final year undergraduate project supervised by Senior Lecturer, Dr N.D. Jayasundere under an ongoing R&D program into underwater devices. For the same project student H.P.A. Chandrasiri received the S.D. Jayasundere Memorial Award for the Best Research Student in the best research project, at the last general convocation.

## E.W. Karunaratna Memorial Award

Final year undergraduate project “Multi Stage Dimmable Smart Fluorescent Lamp” presented by the Dept. of Electrical and Information Engineering won the E.W. Karunaratna Award for the year 2013. This competition is held annually by the Institution of Engineers, Sri Lanka (IESL) among engineering students in all universities in Sri Lanka. This project competed with 14 other projects from the universities of Moratuwa, Peradeniya, Ruhuna and Open University of Sri Lanka. The project was carried out by Y.G.T. Saranga, T.R. Madarasinghe, H.E.S. Sumathipala and R.K.D. Viranga under the supervision of Senior Lecturer, Mr. E.H. Jayatunga. Each member of the project received a cash award and a certificate during the Annual Induction and Graduation Ceremony held at BMICH on 22<sup>nd</sup> Aug. 2014.

## Presidential Awards for Scientific Publications- 2014

Following academics of the UoR received Presidential Awards for scientific publications, at the Ceremony held at Waters Edge, Battaramulla, on 17<sup>th</sup> Oct. 2014 with the participation of His Excellency the President Mahinda Rajapakse.



From the left; Professor. L.P. Jayatissa, Professor K.D. Pathirana, Senior Professor Malik Goonewardene, Dr. Channa Yahathugoda, Dr. Vasantha Devasiri, Senior Professor Mirani Weerasooriya, Dr. Sudeera Jayasinghe, Senior Professor (Miss) P.R.T. Cumararatunga, Professor P. Mangala C.S. De Silva, Mr. Gayantha R.L. Kodikara, Dr. Champika Bodinayaka,, Dr. Ajith Nagahawatte and Professor S.D. Wanniarachchi.





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To:

### About UoR Highlights

Welcome to Vol. 3 No. 2 of UoR Highlights, the official newsletter of the University of Ruhuna.

We publish UoR Highlights biannually with the aim of fostering a dialog among our key stakeholders.

More specifically, the UoR Highlights publishes information on

recent developments, events, research publications, conferences and collaborative research projects at the University of Ruhuna. In addition, in each issue, we publish feature articles which address current topic in education and higher education.

Together with other publications at

the University of Ruhuna, we believe that UoR Highlights will generate interest among our stakeholders by creating a platform for fostering an effective dialogue.

We welcome your comments and suggestions that will enhance the future directions of UoR Highlights.

### Science Faculty Day - 2014

The Science Faculty Day-2014 was held at the Gymnasium and its premises on 19th September 2014 from 9.00 am to 10.30 pm. The objective of this program was to improve the soft skills of students and to strengthen the

relationship between students, academic staff and non-academic staff of the Faculty. Vice Chancellor and the Deputy Vice Chancellor attended the inauguration ceremony held in front of the administration building by hoisting

the National and University flags. A special donation was made to Rohana Special School, Welegoda, Matara, with the funds collected from donors. Several events were conducted during the day



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