

Review of Sida/ SAREC Research Cooperation:

SYNTHESIS REPORT

Krishan Deheragoda

**Sida/SAREC RESEARCH COOPERATION
PROJECT ON REGIONAL IMBALANCES &
POVERTY ALLEVIATION**

A Collaboration Between

Department of Geography

University of Sri Jayewardenepura - Sri Lanka

&

Department of Social & Economic Geography

Uppsala University – Sweden

October, 2010

**REGIONAL IMBALANCES & POVERTY
ALLEVIATION**

A Sri Lanka – Sweden Research Collaboration

Review of Sida/SARAC Research

Cooperation:

SYNTHESIS REPORT

1998 to 2010

Collaborating Institutes

Department of Geography

University of Sri Jayewardenepura – Sri Lanka

&

Department of Social and Economic Geography

Uppsala University – Sweden

Financial Support

Sida/SAREC

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Review of Sida/SARAC Research Cooperation: SYNTHESIS REPORT - 1998 to 2010

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ABBREVIATIONS

BOT-	Balance of Trade
CIDP-	Conflict-induced Internally Displaced Persons
FDI	Foreign Direct Investments
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GPS	Global Positioning Systems
GSLI	Global Services Location Index
ICT	Information and Communication Technology
IDP	Internally Displaced Persons
IRDP-	Integrated Rural Development Projects
ITCZ	Inter Tropical Convergence Zone
LTTE-	Liberation Tigers of Tamil Elam
MDG	Millennium Development Goals
NARESA	Natural Resources, Energy and Science Authority
NSF	National Science Foundation
REDD	Reduce Emissions from Deforestation and Degradation
SAREC	Department for Research Cooperation in the Sida
SEK	Swedish Krona
SL	Sri Lanka
SLSEA	Sri Lanka Sustainable Energy Authority
Sida	Swedish International Development Cooperation Agency
UGC	University Grants Commission
UNDP	United Nation Development Programme
UNFCC	United Nations Framework Convention on Climate Change
USA	United State of America
USJ	University of Sri Jayewardenepura
UU	Uppsala University
UXO	Unexploded Ordnance
VC	Vice Chancellor

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INTRODUCTORY SECTION



EXECUTIVE SUMMARY

by

PROFESSOR KRISHAN DEHERAGODA

Project Leader, Sida-SAREC Research Cooperation Project on Regional

Imbalances & Poverty Alleviation at the

Department of Geography- University of Sri Jayewardenepura – Sri Lanka

The main objective of the Swedish Development Cooperation Agency, Department for Research (Sida/SAREC) is to strengthen the research capacity of developing countries and their access to knowledge in areas of central importance for development. Sida/SAREC has its own modalities, but forms part of the Sida portfolio of programmes and Swedish development cooperation efforts in general. Hence the programme had created conditions and support processes that lead to identification of policy relevant strategies for mitigation of Regional-imbalances and Poverty-reduction in Sri Lanka, and 'contribute to make it possible for poor people to improve the quality of their lives'

SAREC was originally set up for research cooperation. Apart from support to international research it soon became evident that a first step was to strengthen research capacity, particularly in poorer countries. The literature reveals that the first 10 years of the support are characterized by support to national research councils. Lessons learnt have suggested that, in most cases, these bodies lacked the capability to prioritize research based on scientific criteria. A counter measure during the next period in 1990s was to strengthen research capacity through research training using the so-called sandwich mode.

Over time, it became obvious to Sida/SAREC that training of researchers had to be supplemented with investments in research infrastructures and scientific equipment. Catering for the needs of scientific information support to libraries and archives was included in the approach. Together, these should contribute to the

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establishment of research environments that would be attractive work places for the researchers trained in the bilateral programmes. Through these additions, the support gradually became more institutional than individual. In the beginning of the 1990s, a further shift was made to provide more comprehensive support with the aim of inculcating research cultures at national public universities.

In the light of the above, Sida/SAREC Research Cooperation Project Funding were opened to the Sri Lankan Universities since mid 1990s. As a result, the Sida/SAREC Research Cooperation Project on Regional Imbalances and Poverty Alleviation at the Department of Geography in the University of Sri Jayewardenepura was commenced in 1998. This has been awarded to USJ- Department of Geography through a competitive selection process thanks to initiative taken by the then Senior Professor M.M. Karunanayake – the Chair of Geography at the University of Sri Jayewardenepura, Sri Lanka.

The purpose of this Sida/SAREC Research Cooperation: Synthesis Report is to assess the support given by Sida to bilateral research cooperation activities that aim to strengthen research capacity of the University of Sri Jayewardenepura, Sri Lanka through its Department of Geography.

The main objectives of the Sida/SAREC Research Cooperation Project on Regional Imbalances and Poverty Alleviation at the SL/USJ/Department of Geography is to focus mainly on several dimensions, namely: *Spatial Dimension* to specialize on Central and North Central Provinces, *Capacity Building Dimension* to empower the academics and the graduate students, *Infrastructure Development Dimension* to create an conducive environment for Teaching, Training and Research.

The key research objective of this project was primarily to focus on the regional imbalances and poverty alleviation in Sri Lanka with a view to identify policy relevant strategies for the end use. The poverty alleviation aspect has also been given a special emphasis in the research works carried out by the project. This is because the poverty alleviation strategies in Sri Lanka have often overlooked the

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deeper issues relating to poverty, such as poverty derived destabilization of households, seasonal impacts of poverty, poverty thresholds, feminization of poverty, transfer of poverty related stress from men to women, poverty and its impact on environmental degradation and the cultural attributes of poverty as they shape the world view of the poor. Hence, the project aims at investigation these issues at the micro level to help fine tune poverty alleviation within the context of regional development strategies in Sri Lanka.

This assessment covers the Sida/SAREC Research Cooperation Project of the Department of Geography of University of Sri Jayewardenepura, implemented in collaboration with the Department of Social and Economic Geography of Uppsala University - Sweden over the past decade. This has now come to an end with great success. The collaboration between the Sri Jayewardenepura and Uppsala Universities was particularly active in the areas of postgraduate research training, using the so-called sandwich mode and dissemination of knowledge as well as exchange of research experiences gained through this project among a wide range of academic and research institutes in both Sri Lanka and Sweden.

A number of outcomes has been achieved in terms of capacity building of individual staff members, research infrastructure and, improvements in research management. The activities implemented under this collaboration are relevant from an institutional perspective because they respond to justifiable needs identified by the staff of the respective institutions. It is less easy to quantify their direct impact on the developmental relevance. However, the capacity building, research work, publications and the development of teaching and research environment, through this project have had a very positive impact on the quality and relevance of our undergraduate and postgraduate teaching, training & research, and contributions made by our academics in their respective fields to the national development of Sri Lanka.

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It is likely that a more direct link with regional development and poverty reduction objectives may be achieved during the articulation and selection of research projects without compromising the quality of the research and research training, or the long-term impact. The project has positively influenced the impact of the activities at the institutions as well as their efficiency. The results of this Sida/SAREC research projects had find their way to outside users in the public or private sector, as most of its research findings have been published or presented at both local and international seminars and conferences. The policy relevant research findings and strategies had been published in four volumes by the project, directly under its two main thrust areas, i.e. regional development and poverty alleviation.

The gracious funding of about Rs.77 million (1998-2010) and facilitation received from the Sida/SAREC Stockholm enabled us to confer 6 Ph.Ds, 1 M.A and 1 M.Phil. Degree to the academic staff members of the both Geography and Economics Departments of the University of Sri Jayewardenepura, under the split programme with the Swedish collaborating institution – Department of Social and Economics Geography in the Uppsala University. Also we have been able to conduct a once for all 2 year M.Sc. Programme on Human Security and effectively confer 12 M.Sc. degrees under the auspices of our project, fulfilling the Capacity Building Objective of the project. Further, we have produced 4 publications on regional development and poverty issues with policy relevant mitigation strategies. Moreover, couple of dozen research works have been conducted and their findings were been presented in academic and research forums both nationally and internationally, realizing the research, awareness creation and dissemination of knowledge objectives of the project to its full potential. This project has enabled the USJ/Department of Geography to create a favourable teaching, training and research environment through the development of its infrastructural base including a functioning of state of the art GIS research laboratory and a teaching facility.

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Thanks to the long standing Sida/SAREC Research Cooperation, the confidence of SL/USJ/Department of Geography had grown from strength to strength during the past decade and recorded unprecedented achievements. Among them are: appointment of two Vice Chancellors including the current V.C. from among the academic staff members our department; appointment of five associatees of the project as Head of the Department in both the departments of Geography (*3 Heads*) and Economics (*2 Heads*) during the period under review; appointment of number of our departmental colleagues to other key academic and administrative positions in the USJ; engagement in rendering services to the Central Government by our colleagues in their areas of specialization as consultants, advisors and even as senior administrators in the GOSL; winning both national and international awards by three academics for their research contributions; and finally in 2006, the USJ/Department of Geography has been accredited as one of the most confident academic departments by an evaluation conducted under the auspices of Quality Assurance and Accreditation Council of World Bank/University Grants Commission of Sri Lanka, after assessing 8 aspects of the department related to quality and relevance of university education. They are as follows; 1. Curriculum design, content and review, 2. Teaching learning and assessment methods, 3. Quality of students including student progress and achievements, 4. Extent and use of student feedback, qualitative and quantitative, 5. Postgraduate studies, 6. Peer observation, 7. Skills development, and 8. Academic guidance and counseling.

It is a well known fact that most foreign funded projects, spends over 50-75% of their funds for management and administration purposes, while committing very little to achieve the real project objectives. In contrast, over 90% of the Sida/SAREC-funds allocated to SL/USJ/ Department of Geography project have been committed to finance the capacity building training, research work, publications and the development of teaching and research infrastructure. Balance part of its allocation has been transferred to bridge the funding gap of our collaborator at the Uppsala University, with the concurrence of Sida –Stockholm in 2007 and 2010 respectively. This was possible only due to the active support and

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absorption of the costs of project administration and management by the University of Sri Jayewardenepura. Senior Academics of the USJ/ Department of Geography were enabled to undertake the project administration and management in the capacity of a Project Leader, while all the project funds were effectively administered by the financial management staff of the USJ/Faculty of Graduate Studies by its Senior Assistant Bursar under the guidance of the University Bursar and the Vice Chancellor.

It is worth noting that a greater collaboration had been witnessed between the researchers of this project. However it is necessary to increase similar relationships between researchers involved in the other Sida/SAREC supported research within and outside Sri Lanka. Such collaboration between Sida/SAREC-financed research projects at the institutions seldom takes place, and also opportunities to collaborate with regional partners are underutilized. This is a missed opportunity for Sida as a whole because it often could make good use of the capacity generated through the Sida/ SAREC bilateral research programme. Hence we are determined to establish better coordination between the various programmes which are implemented within the country with a view to improve this situation during the post project period.

Ensuring the sustainability of the planning and implementation of the research projects in the absence of external Sida/SAREC funding will be a problem unless substantial increase in the local R&D budgets, which

is most unlikely in the near future. Therefore, it is a responsibility of both the project proponent – SL/USJ/Department of Geography and the project collaborator- Sweden/UU/Department of Social and Economic Geography, jointly to search for new avenues for further collaboration and partnerships to harness the research environment created by the project to its full capacity.

We were fortunate enough to have an excellent partnership with the Sida/SAREC designated collaborating institution, i.e. the Department of Social and Economic

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Geography of Uppsala University. It has shown more interest on the partnership activities than anticipated. However it would have been better, if our graduate students were given a broader exposure both in time and content during their visits to Sweden for training and capacity building. This situation should be acknowledged and addressed in the future collaborations of this nature.

The staff at Sida/SAREC Stockholm has provided a dedicated and prompt service each time we turned to them for financial disbursements, assistance and guidance and have proved their ability to make a difference in the success of a country programme. Similar support and cooperation was received from the relevant authorities of the University of Sri Jayewardenepura as well.

It is necessary to place a record here for the support, guidance and the assistance given to this project by the incumbent Vice Chancellor and the Dean Faculty of Graduate Studies. All the Heads of the Department of Geography and former Project Leader including all the academic and non academic staff have extended their fullest cooperation for the well being of this project. They shared the burden of the project management when and where necessary since the inception of this project to date. A special acknowledgement is also deserved by the Bursars and the Senior Assistant Bursars attached to the Faculty of Graduate Studies, particularly to the current SAB at the faculty for their dedicated service rendered, making the whole financial management of the project, clean, accountable and transparent during the tenure of this project.

The bilateral cooperation enjoyed by this project from the Sida/SAREC-Stockholm, University of Sri Jayewardenepura and Uppsala University has surely attributed to create a "Best Practice Project" for North – South Cooperation. The research findings and the publications of the project also benefits international and regional research programmes supported by Sida/SAREC. Most of such information has been presented not only at the University of Uppsala but also in many other Swedish Institutions and other countries by the researchers. Many of them are published in the internet, adding value to such research outcomes.

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During the entire tenure of the project, Evaluation Reports have been submitted to Sida/SAREC-Stockholm with a Progress Revive Report for the previous year along with an Activity Report for the current year at the beginning of each year along with a requisition form for the disbursement of funding. These reports have carried M&E status of the project in form of a Progress Reviews. The reporting format adopted by the project has been commended by the Sida/SAREC-Stockholm on several occasions as an example for other similar projects. However, it would have been better, if the Sida/SAREC-Stockholm defines benchmarks and indicators for monitoring progress, particularly in relation to the annual reporting, at the planning stage of each project, depending on their nature.

It would have been better if Sida/SAREC programme continues to a different and renewed phase to upkeep the sustainability of all the efforts, investments. This bilateral research cooperation project between Sida/SAREC-Stockholm and the SL/USJ Department of Geography had commenced at a time when Sri Lanka was engulfed by the flames of internal conflict which escalated into a full scale military confrontation. These circumstances had some impacts on carrying out research activities in certain areas. But it was never a constraint for the overall performances of the project.

Today, we are making this wrapping up in a country which is totally free and aspiring to have a leap forward in development in all spheres. Time has come to put our project findings into practice. Time has come to discharge the talent and the abilities of our doctoral academics into nation building process. Institutions outside the University of Sri Jayewardenepura are waiting to get the best assistance from our GIS database and knowledge to stimulate the regional development and poverty alleviation processes, island wide. Hence, there is scope for considerable improvement in the impact of the programme if: cooperation with real-life activities is increased, better synergy with other Sida efforts is realized, and the focused approach is further refined.

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MESSAGE BY DR. NLA KARUNARATNE

Vice Chancellor, University of Sri Jayewardenepura – Sri Lanka

It gives me a great pleasure to congratulate the Sida/SAREC Research Cooperation Project at the Department of Geography of my University on its successful completion.

The Sida/SAREC Research Cooperation Project at the Department of Geography of the University of Sri Jayewardenepura – Sri Lanka has been jointly implemented during the past decade with the collaboration of the Department of Social and Economic Geography at the Uppsala University - Sweden has not only concluded with a great success, but also pave the way for reciprocal enrichment and exchange of research, capacity building and international understanding. It has laid the foundation for the establishment of scholarship and academic partnership and research collaboration between two National Universities in Sri Lanka and Sweden, proving the real meaning of North –South Cooperation. This partnership between my University and the Uppsala University is one of the best examples of mutual understanding and corporation at a time when the positive and remarkable achievements of Sri Lanka towards global peace and sustainable development are being seriously undermined by some ill informed sections of the international community. In this perspective the impact of this Sida/SAREC Research Cooperation Project will not just limit to the two collaborating universities in Sri Lanka and Sweden, but extend to other universities and research institutes as well.

Permit me to extend my sincere gratitude as the Vice Chancellor of the project proponent institution: to Sida/SAREC Stockholm for the provision of generous funds enabling the smooth functioning of this project and the collaboration between the University of Sri Jayewardenepura and the Uppsala University; to Emeritus Professor MM Karunanayake for being instrumental in securing this project for our university; to Professor Krishan Deheragoda for effective

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administration and management of it; and to Dr. Clas Lindberg for all what he has done on behalf of Uppsala University to realize the objectives of the project. I also take this opportunity to congratulate all those who have been conferred with the Ph.D, M.Phil, M.Sc. & M.A. Degrees.

Last, but not least, I thank the University Registrar, successive Deans of the Faculty of Graduate Studies and staff, University Bursars and Senior Assistant Bursars who were attached to the Faculty of Graduate Studies during the project period and the Heads and the Staff of the Department of Geography for their collective and individual contributions to make this project a great success, over the past decade. Thank you for your commitment to our common mission, and I wish you all the best as you are proudly wrapping-up the project that we are all justifiably proud of.

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MESSAGE BY EMERITUS PROFESSOR MM

KARUNANAYAKE

*Member of the Council – USJ, Former Chair at the USJ- Department of
Geography,*

*Founder Project Leader of the Sida/SAREC Research Cooperation Project &
Founder Dean of the Faculty of Graduate Studies – USJ – Sri Lanka*

Sida/SAREC Research Cooperation Project which commenced in October 1998 was concerned with policy relevant studies on regional development and poverty alleviation. The project rationale was derived from the need to rethink regional development policy in Sri Lanka particularly for the purpose of establishing the relevance of an integrated regional development and poverty alleviation approach to national development. The project in which Uppsala University was the principal collaborator was also supported by the Universities of Karlstad and Gothenburg in an associate capacity. It had four project components, namely (a) Theme based research on regional development and poverty alleviation, (b) Human resource development through Master's and Doctoral training and other forms of skills development (e.g. GIS training), (c) Infrastructure development, and (d) Knowledge dissemination. All these project components have been completed with distinction making this project a fine example of North/South research collaboration. The project has also made it possible for the Department of Geography to emerge as a centre of excellence for studies in regional development.

While we can be justifiably proud of project achievements new challenges have emerged. Sri Lanka as a country emerging from conflict is facing not only problems of spatial development but also of social reconstruction and national integration. It is important that the Department of Geography of the University of Sri Jayewardenepura with its new found expertise in the areas of regional development and poverty alleviation takes the initiative to assist in governmental efforts in this direction through action research, policy reviews, advocacy and other means.

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As founder Project Leader I am most grateful to Sida/SAREC for its generous funding of the project. Our sincere thanks are due to our colleagues from Uppsala University who have supported us all the way and given of their best to make the project a success. The Sida/SAREC Research Cooperation Project has been able to close on a high note owing to the unstinted cooperation received from the several Vice Chancellors who held office during the project period. Special mention must be made of Professor P. Wilson who was Vice Chancellor at the time of project commencement. Professors Dhammika Tantrigoda and Kumudu Wijewardena both of whom held office as Dean Graduate Studies too were supportive of project activities. Present Vice Chancellor Dr. NLA Karunaratne and present Dean Graduate Studies Professor Swarna Piyasiri have overseen and supported the project activities linked to the winding up phase with unwavering commitment. It is also my duty to acknowledge the support given by the present Registrar Mr. Jayalath Mutthettuwegedara and his predecessor Mr. Mahinda Abeywardena; and the Bursar, Assistant/Deputy Registrars and the Assistant/Deputy Bursars of the Faculty of Graduate Studies. The role played by the successive Heads of the Department of Geography and the Project Team led by Professor Krishan Deheragoda in giving meaning and substance to the Project is gratefully acknowledged.

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MESSAGE BY PROFESSOR SWARNA PIYASIRI

*Dean, Faculty of Graduate Studies, University of Sri
Jayewardenepura, Sri Lanka*

I issue this message of felicitation with extreme happiness to mark the very successful wrap-up of a remarkable project implemented by the Department of Geography under the supervision of the Faculty of Graduate Studies of the University of Sri Jayewardenepura. I have observed during my short tenure in office in the capacity of Dean – Faculty of Graduate Studies, that this project has been managed very professionally with due diligence and utmost transparency. The project activities are well documented and the outputs are highly visible and tangible. I am glad to learn about the many achievements that this project has brought to the Department of Geography and to the University as a whole, particularly in the area of post graduate research and training, which is directly coming under the purview of my Faculty.

The Department of Geography of the Sri Jayewardenepura and its knowledge partner - the Department of Social and Economic Geography of the Uppsala University, has implemented a capacity building collaboration using the so-called sandwich mode very productively. Under the above collaboration 6 Ph.Ds, 1 M.A and 1 M.Phil Degree have been conferred to academic staff members of the both Geography and Economics Departments of this university through my Faculty. Also it should be placed on record that under the administration of the Faculty of Graduate Studies – USJ, we have been able to confer 12 M.Sc Degrees in Human Security for those who have completed the 2 year programme, conducted by the Department of Geography through this Sida/SAREC Research Cooperation Project. Further, it is commendable that this project has produced 4 publications on regional development and poverty issues with policy relevant mitigation strategies and successfully completed couple of dozen research projects the findings of which

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have been presented in academic and research forums both nationally and internationally. This project has enabled the USJ/Department of Geography to create an impressive post graduate teaching, training and research environment through the development of its infrastructure base including commissioning of a state of the art GIS research laboratory and a teaching facility.

Sida/SAREC Research Cooperation Project on Regional Imbalances and Poverty Alleviation at the Department of Geography of this University is one of the most successful and outstanding projects where my Faculty was involved in, in regard to the management of its funds and accounts. I use this opportunity to thank all my staff for the excellent services that they have rendered to ensure the smooth advancement of the project. The benefits derived, in the form of a Capacity Building; Research and Awareness Creation; and Infrastructure Development by this Project, particularly at the Department of Geography will certainly enable it to be a center of excellence in Spatial Sciences at a time when Sri Lanka is aspiring to become a country ready to address effectively issues pertaining to regional imbalances and poverty in order to create an environment where all Sri Lankans will live in peace and prosperity. I congratulate Prof. Krishan Deheragoda and his team for all the achievements made under this project in cooperation with the Uppsala University and the Sida/SAREC Stockholm.

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MESSAGE BY DR. CLAS LINDBERG

*Senior Lecturer & Project Leader at the
Department of Social and Economic Geography - Uppsala
University - Sweden*

*(the Swedish Collaborating Institute of the Sida/SAREC Research
Cooperation Project at the Department of Geography – USJ – Sri Lanka)*

Ten years ago the Head of Department handed me a paper and asked me to read it and say if we are interested. I read, called a friend at Sida and asked, what this is all about, and concluded that, yes, we are interested! We then knew nothing about University of Sri Jayewardenepura and my guess is that their knowledge about the Department of Social and Economic Geography, Uppsala University was at about the same level. A kind of blind date? had hence been arranged by Sida to meet with the visiting delegates from the Department of Geography of the University of Sri Jayewardenepura – Sri Lanka.... Today, we are grateful for that arrangement. If it was not love at first sight at least there was understanding, straight communication and mutual respect from the very start...

Through the years a strong friendship was added to this. The measurable results of this cooperation are substantial and noted down in Section Two. But, there are also immeasurable results, usually not counted in reports but very often in the long run even more important. A wide network has been created between many institutions and individuals in both countries, a tremendous resource on which we now intend to build future co-operation, both in teaching and in research. Especially the positive results in the Swedish academic environment are often not fully recognized. This co-operation has brought ideas, insights and experiences not only to our department but, to several academic institutions in Sweden. This is truly invaluable for any academic environment.

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The number of people from Sri Lanka who have contributed throughout the years is far too big to include them all by name here so let me just express my deepest gratitude to my two primary counterparts, the two project leaders, in chronological order; Professor Emeritus Marcus Karunanayake and Professor Krishan Deheragoda. When we are now wrapping up a thought also goes to friends no longer with us. In the first years of the project Professors Anders Närman and Kamal Karunanayake contributed greatly with both their academic expertise and their warm personalities.

It brings a special satisfaction to this occasion that when we now end our (formal and Sida-funded) cooperation peace has finally come to Sri Lanka. Hence we can wrap this project up in an atmosphere of optimism and stand ready to face future academic challenges.

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MESSAGE BY UHN WISHWAKULA

*Head, Department of Geography, University of Sri
Jayewardenepura – Sri Lanka*

I feel extremely privileged to issue this felicitation message on the occasion of the "Grand Finale" of the Sida/SAREC Research Cooperation Project of my Department, implemented with the collaboration of the Department of Social and Economic Geography at the Uppsala University Sweden. It is little over one decade since this Project titled "Regional Imbalances and Poverty Alleviation" was established under the founder Project Leader Prof. MM Karunanayake. It has been a project with multi faceted dimensions - *Spatial Dimension* focusing on the Central and the North Central Provinces, *Capacity Building Dimension* to empower the academics and the graduate students and an *Infrastructure Development Dimension* to create a favourable environment for Teaching, Training and Research.

The Department of Social and Economic Geography at the Uppsala University Sweden had been our trusted knowledge partner and contributed much with dedication to train our academics and lead them to six Ph.Ds, one M.Phil and one M.A., while providing special training in GIS, Remote Sensing and Advance Research and Spatial Analysis Methods to many. Thanks to this project, the confidence of the Department of Geography at the University of Sri Jayewardenepura had grown overwhelmingly during the past decade. It has contributed to make our department a center of excellence in teaching, training and research with the installation of a State of the Art GIS Research Station and a Teaching Laboratory with over 75 computers - fully loaded with latest Arc GIS capabilities; and the provision of a well equipped Soil Laboratory; fully computerized Weather Station; Research Library and scientific equipment including GPS, Satellite images; and a mobile Research Facility in the form of a 52

seat brand new bus, to name a few. There is couple of dozens of policy relevant research including 4 publications on Regional Development and Poverty Alleviation in Sri Lanka to the credit of this project.

Thanks to this project, today I am proudly heading one of the most strong and resourceful academic departments within the University system of Sri Lanka. Let me congratulate Emeritus Professor MM Karunanayake and Professor Krishan Deheragoda as well as the Uppsala University team headed by Dr. Clas Lindberg for all what they have done through this project for the advancement of our colleagues and the department. Last but not least, I must express my sincere gratitude to the gracious funding and facilitation rendered by the Sida/SAREC Stockholm to our department through this project, without which nothing would have been possible. Finally let me say that this successful venture is notable and offers us an exceptional opportunity to contribute to create a better Sri Lanka in a truly remarkable manner.

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**MESSAGE BY EMERITUS PROFESSOR GUNNAR
OLSSON**

*Department of Social and Economic Geography - Uppsala
University - Sweden*

*(the Swedish Collaborating Institute of the Sida/SAREC Research
Cooperation Project at the Department of Geography – USJ – Sri Lanka)*

In my double capacity as a Swedish citizen and a university teacher, it is with pride and satisfaction that I have followed and participated in the Sida/SAREC Research Cooperation Project. From the very beginning I was much impressed by the academic standards, intelligence and integrity demonstrated by the two project leaders – Professors Marcus Karunanayake and Krishan Deheragoda – and I was very pleased when they asked me to help with the supervision of a doctoral student researching the “inbetweenness” of the internally displaced in the Northern part of Sri Lanka. My association with the project has enabled me to learn a great deal about a country and a people I did not previously know and for this I am eternally grateful.

It is my great pleasure to congratulate Sida/SAREC for its vision in promoting research partnerships among countries of the North and South. I am fully aware that the success of the project is also due to the empathy and understanding that was built in the project between scholars of the two Universities- Uppsala and Sri Jayewardenepura. On the Swedish side Dr Clas Lindberg and Professors Lennart Stromquist, Sune Berger and Ali Nagib played a highly proactive role. On the Sri Lanka side the team of scholars, graduate students and the two project leaders, one succeeding the other, showed commendable initiative, commitment and scholarship in implementing the project. In retrospect I am very happy that I let myself be tempted to participate in this highly successful project, especially as it has helped me to gain unexpected insights into the rich concept of inbetweenness.

SECTION TWO



KEYNOTE ADDRESS

Sida/SAREC RESEARCH COOPERATION PROJECT AT THE USJ- DEPARTMENT OF GEOGRAPHY (1998-2010): REFLECTIONS ON A SUCCESS STORY

by

EMERITUS PROFESSOR MM KARUNANAYAKE

*Member of the Council – USJ, Former Chair at the USJ - Department of
Geography, Founder Project Leader of the Sida/SAREC Research Cooperation
Project & Founder Dean of the Faculty of Graduate Studies – USJ – Sri Lanka*

2.1. PRELIMINARY REMARKS

The Sida/ SAREC Research Cooperation Project which has now come to an end had been in existence for over a decade. This in itself is a significant achievement. The Project was set up in line with Sida policy to support national knowledge systems. This policy finds further articulation in the Guidelines for Applying Institutions published by the Department for Research Cooperation (SAREC) in 2000 where it is stated that:

University support through SAREC is oriented towards strengthening research, promoting structures, academic capacity for research and research implementation in selected problem areas. Particular attention is directed to the creation of capacity to provide research training and other postgraduate education, which is seen as crucial for the creation of a vital academic environment.

The time is now opportune to revisit the project to reflect on what it has achieved over a decade long period as well as on the legacy it leaves behind. The writer was responsible for the project from its inception until his retirement at the end of October 2005. By then Dr. Krishan Deheragoda (now Professor) had been installed

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as Project Leader. In this write up the writer has made an effort to cover the developments over the entire project period.

2.2. PROJECT COMMENCEMENT AND FOLLOW-UP

Sida/SAREC announced its competitive awards for 1998/1999 in the second half of 1997. In the first quarter of January 1998 a team led by Professor M.M.Karunanayake, with Professors Dhammika Wanasinghe and M.D.C. Abhayaratne as members submitted two proposals to Sida/SAREC through the University and the University Grants Commission. The one was on regional development and the other on poverty alleviation. Both projects were selected for funding by Sida. In September 1998 a visit was made by the research team to Sweden to finalize project arrangements. This involved discussions with Sida/SAREC Head Quarters in Stockholm, Department of Social and Economic Geography at Uppsala University, and the Department of Human and Economic Geography at the University of Gothenburg. At these discussions it was decided that the University of Sri Jayewardenepura would collaborate with both the Universities of Uppsala and Gothenburg in project implementation. After some time it was found that the Uppsala connection was more feasible as Gothenburg had its own commitment to the University of Kelaniya. Although Prof. Sune Berger was suggested as the likely Coordinator for Uppsala his impending departure to Karlstad saw Dr. Clas Lindberg being nominated to the position. On the initiative of Professors Anders Narman and Sune Berger Gothenburg and Karlstad Universities were linked to our project in a supporting capacity.

Towards the end of 1999 Sida/SAREC announced a fresh round of awards. This was for on-going as well as new projects. Our previous proposal was resubmitted on the same format i.e. as two projects but with some modifications and refinements. This enabled us to receive funds for the continuation of the project until end 2001, and thereby to carry forward the research cooperation with Uppsala University as

the principal partner, with the other two Universities once again in a supporting capacity.

Next round of awards was announced in 2001. This time round we submitted a fresh proposal on the same theme to ensure the continuity of project activities that had already been undertaken, but with a change in project structure by integrating the two components- regional development and poverty alleviation. In this proposal Karlstad was identified as the associate partner with Uppsala continuing as the principal partner. However, the links with Gothenburg were sustained in a more informal manner. On the basis of this proposal we were successful in getting funds to continue project activities until 2005. Therefore, the project which we are winding up now should have ended in 2005. However, Sida had been magnanimous enough to let the project continue until 2010 to make effective use of unspent funds which had accumulated in the course of project implementation, for reasons beyond our control.

2.3. PROJECT DESIGN

From the very beginning the project was designed to carry out research on regional development and poverty alleviation and comprised four components viz. (a) Research, (b) Doctoral and Master's Training and Skills Development, (c) Infrastructure Development, and (d) Knowledge Dissemination. In regard to the research component the project placed a high premium on field work and a field methodology was developed in consultation with Swedish counterparts to answer research questions in the most rigorous manner. Key themes were identified for field investigation. The interface between poverty and regional development was kept in mind in the implementation of the field programme. Spatially, the research programme focused on the Central and the North Central Province.

2.4. PROJECT IMPLEMENTATION

The project was implemented by a project leader assisted by two team leaders for the two project components. Around 2003 this structure was changed to accommodate two coordinators one for GIS and the other for general administration. For University administration purposes the project came under the purview of the Faculty of Graduate Studies. The rationale for this was that the project had to do with post graduate training and research. The progress of research activities was subject to regular reviews by Sida through various mechanisms at its disposal (annual reviews, progress reports submitted by the project, mid-term evaluations by visiting review terms etc.). Moreover, the project leader presented a status report in person to Sida in Stockholm from time to time. These meetings were attended by some of our Uppsala counterparts as well, and in particular Dr. Clas Lindberg.

In regard to financial administration, project funds were initially kept in the University fund. But later to keep track of funds a separate ledger was opened at the Faculty of Graduate Studies as well as a separate bank account. The use of funds was overseen by the Finance and Capital Works Committee of the University. The funds were subject to government audit. The Sida/SAREC too carried out its own audits through an international audit firm. The project budget had three segments. One segment had to do with funds for the applying institution. The second segment was for the collaborating institution i.e. Uppsala University. No separate funds were made available to the two supporting institutions, namely, the Universities of Gothenburg and Karlstad. The sharing of funds with Uppsala was an internal matter for the Universities concerned. The third budget segment was that allocated to the applying institution i.e. University of Sri Jayewardenepura and administered by Uppsala University.

2.5. PROJECT ACHIEVEMENTS

The project achievements are presented below under the four heads:

- a) Research on Poverty and Regional Development
- b) Doctoral and Master's Training and Skills Development
- c) Infrastructure Development
- d) Knowledge Dissemination

a) Research on Poverty and Regional Development

The focus of the research cooperation project has been on Regional Development and Poverty Alleviation. The research activities were undertaken within a well-formulated theoretical and analytical framework. The end objective of the research programme has been to influence development policy relating to regional development and poverty alleviation at the national, regional and the local level. There had been a great deal of interaction between our team and the team of Swedish counterparts on the theoretical, methodological and the procedural aspects of the research studies. In 1999 prior to the commencement of the field programme a brainstorming session was held at the Sri Lanka Foundation Institute, Colombo which was attended by policy makers, practitioners, academics and the Swedish counterparts for further refinement of ideas. The project focused on the need to rethink regional development and poverty alleviation policies and strategies for the purpose of:

- I. Establishing the relevance of integrating regional development and poverty alleviation approaches to development;
- II. Determining the re-distributive power of regional policy particularly in regard to better spatial distribution of the benefits of social and economic development and alleviation of poverty; and,

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- III. Making sub-national and local authorities effective implementers of regional development and poverty alleviation policies and strategies.

The scope of the research activities was later widened to incorporate internal displacement and its impact on regional development with special emphasis on poverty, marginalization and social insecurity. It was made mandatory for researchers and graduate students to work within the conceptual framework formulated by the project.

Details of research activities carried out under the aegis of the project (apart from the Master's and Doctoral theses) have been reported by Professor Deheragoda in his review of the project. It is evident from the titles of studies listed that the researchers have focussed not only on the social and economic processes but also on the environmental dimensions of regional development and poverty alleviation.

b) Doctoral and Master's Training and Skills Development

The project had the unique distinction of offering doctoral training to six members of the University staff, four from the Department of Geography and two from the Department of Economics. An MA

by research and an MPhil were also successfully completed under the aegis of the project. Research training was imparted under a split arrangement between Uppsala University and the University of Sri Jayewardenepura. The first three doctoral students had to follow a course on theoretical concepts and research methods prior to the commencement of their research programmes. This was done in association with the Department of Geography at the University of Gothenburg under the tutelage of Professor Anders Narman. There was a departure from the more conventional approach to research methodology

in that emphasis was also placed on qualitative data analysis. Tailor- made methodological training to suit specific needs, for example, on qualitative data analysis and GIS applications was given to the other three doctoral candidates as well as the MPhil candidate. Each research student worked under the guidance and supervision of an Internal (University of Sri Jayewardenepura) and external (Uppsala or Karlstad University) supervisor. The supervisors had close interaction with one another and with their graduate students. Intensive field work was an essential ingredient of PhD training. The research students were also required to make regular presentations of their on-going research to the research fraternity both at the University of Sri Jayewardenepura and Uppsala University. Another important feature of the project was that both local and Swedish supervisors were in the field with research students from time to time. The subjects chosen by research students for the compilation of their theses have been highly original and imaginative and of practical relevance for Sri Lanka's development.

In addition to the above, the research cooperation also initiated a two year taught Master's Programme in Human Security. The course structure was designed by specialists and was finalized at a one day workshop held in Colombo. The specialists were drawn from both within and outside the University. This programme was specifically designed for middle level officers at national and sub-national level from relevant Government and Non-Governmental Organizations in order to create an awareness of human security issues at global, regional and national level and the need to be conscious of the threats to human security particularly in the backdrop of terrorism that engulfed the country at the time. A batch of thirteen students was enrolled; of whom twelve successfully completed the programme.

In regard to skills development the training given to graduate students and other members of the staff in the application of GIS at the commencement of the project was a significant development. The initial training of two weeks duration was given by Mr. Markku Pyykonen of the Department of Earth Sciences, Uppsala University who visited our Department for the purpose. The graduate students were later exposed to more advanced training at the Department of Earth Science and the

Institute of Archaeology at the Uppsala University. More specialized training was arranged for two graduate students in Sweden later. Another beneficiary of GIS training was the Staff Technical Officer of the Department who followed a two weeks training programme at Uppsala University. The technical officer too underwent one week's training on Arc View GIS 9.3. Version at EMSO (Pvt.) Limited, Sri Lanka in 2009. There has been the further upgrading of GIS skills of the members of the Department of Geography who have followed specific courses on GIS at IMPSO-GIS Co. Sri Lanka (a private organization dealing with GIS) under project sponsorship.

A member of the academic staff of the Department of Geography and a graduate student admitted to the project (who was a member of the academic staff of the Department of Economics) was trained in NUD*IST qualitative data analysis system.

c) Infrastructure Development

Prior to the commencement of the project the Department of Geography functioned in a resource deficient environment. It could be truly stated that the Research Cooperation contributed to bring about a dramatic change in this situation. The most significant feature of infrastructure development was the acquisition of a GIS facility for the department

comprising digitizer, computer hardware (computers and peripherals), ink jet printers and colour potter, and Arc View and Arc/Info soft ware. Two Global Positioning Systems (GPS), Multimedia projector, video camera, video deck, fax machines, tape recorders, overhead projectors and desk top projectors, television and a sophisticated photo copier have been acquired. Two air conditioned GIS laboratories have been installed, one for research and the other for teaching purposes. The GIS facility and software have been upgraded as required. All graduate students were provided with personal laptops. The Department has acquired an internet facility. A wireless weather station has been set-up. The collection of topographic sheets and air photographs has been upgraded on a selective basis. There has also been the acquisition of satellite images. Other acquisitions include soil and hydrological equipment. A more recent development has been the acquisition of a 52 seater bus for purposes of field work. This will be a great boon to carry out field research in the future.

d) Knowledge Dissemination

In regard to knowledge dissemination a key feature had been the four publications on regional development brought out by the project. The first publication was titled "People, Space and Resources: Perspectives on Regional Development Issues in Rural Sri Lanka" and the second "Poverty, Spatial Imbalances and Regional Planning in Sri Lanka: Policies and Issues". The third

publication carried the title "Rural-Urban Interface in Sri Lanka: Studies in Regional Development" while the fourth and final publication was titled "Regional Development in Sri Lanka: the Unfinished Agenda." The four publications contain no less than 22 chapters presented in the form of papers that cover many areas of crucial importance relating to regional development and poverty issues in Sri Lanka. They provide not only the

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means to reflect on the regional development experience, but also the means to inform the international debate.

While the writer was responsible for editing the first three publications the fourth publication was jointly edited by Professor Anders Narman and the writer. Some of the chapters in the several publications were based on project based research, while others fell into the category of commissioned and/or invited papers contributed by selected specialists from outside. The four publications have been well received by practitioners of regional development, university academics and graduate students. It also gives immense satisfaction to note that these publications have been used as recommended reading material for graduate students reading for higher degrees in spatially focussed disciplines in Sri Lankan Universities.

As another aspect of the knowledge dissemination process research studies undertaken through the project were presented at international seminars and conferences by senior researchers, associate researchers and doctoral students. Some of the more important meetings at which papers were presented by senior scholars, associate researchers and/or graduate students from 1999-2005 are as follows:

- Seminar on Development Research for the Next Millennium-the Agenda for the South, University of Gothenburg (December 1999).
- Global Conference on Economic Geography convened by the National University of Singapore (Dec 2000).
- Workshop on Human Security convened in Yogyakarta, Indonesia (2000).
- Seminar on Information Technology for Regional Development held at the University of Karlstad (September 2001).
- Conference on Modern South Asian Studies, Lund University (2004).

Some of the papers presented at international seminars and conferences have been published as abstracts, conference proceedings and chapters in books.

There have been other forms of knowledge communication as well. The Project leader and three members of the research team visited the Regional Centre for Sustainable Development (RCSD) at the University of Chiang Mai in 2000 to exchange views and experiences on issues relating to regional development and poverty alleviation. A highlight of this visit was the first hand experience gained of the social transformation process of the tribal people in Northern Thailand under State initiative.

As project leader of the University of Sri Jayewardenepura-Sida/SAREC Research Cooperation the writer was privileged to be the key note speaker at the International Conference on Public and Private Sector Partnership: Exploring Cooperation, held at University of Karlstad (May, 2002) as well as at the Conference on Regional Development Experiences Across Countries held at the University of Chiang Mai, Thailand in late 2002.

The writer and Professor Krishan Deheragoda were invited to give a joint seminar on the two themes "Alleviating Poverty: Reflections on the Sri Lanka Experience" and "Post-Conflict Development Issues in North East Sri Lanka" at the United Nations Centre for Regional Development, Nagoya in October, 2004. On an invitation received from the Collegium of Development Studies at the Uppsala University they also gave a joint seminar on Post-Tsunami Rehabilitation Challenges and Implications for Regional Development in 2006.

The project also convened several workshops and conferences locally. A two day workshop on Poverty Alleviation and Regional Development: Experience of the North Central Province was held in Anuradhapura in April, 2000 for District and Provincial Level planners and frontline officials. This workshop was extremely interactive and provided for a very useful dialogue between the project team,

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graduate students, the practitioners and our Swedish counterparts. A similar workshop was conducted in 2001 for officials of the Kandy district and was equally successful. This workshop too was attended by our Swedish Counterparts.

The Research Cooperation Project in collaboration with the Central Environment Authority convened a national workshop on "Use of GIS for National Development" in January 2002. This workshop was well attended by representatives from various Universities, government organizations and research institutes (e.g. Urban Development Authority, National Building and Research Organization, Upper Mahaweli Catchment Conservation Project, International Water Management Institute etc.). Professor Lennart Stromquist of the Department of Earth Sciences at Uppsala University and one of our project associates was the keynote speaker.

In the same year (2002) a meeting was convened in Kandy to explore the potential for a South-South Partnership for research collaboration in Regional Development which was attended among various government institutions and departments, graduate students, project personnel and the Swedish counterparts including Messrs Goran Schill - First Secretary to the Royal Swedish Embassy in Sri Lanka . Honourable Dr. Sarath Amunugama, then Minister of Finance, attended the others by two participants from the Regional Centre for Sustainable Development at the University of Chiang Mai Thailand.

A workshop on Regional Development Experience in Sri Lanka: Retrospect and Prospect was convened in Colombo on 13th August 2004. This workshop was attended by practitioners from conference as chief guest.

A seminar on Regional Development in Sri Lanka: Resetting the Agenda was held in 2005 to coincide with the launching of the fourth publication of the project by the same name. This meeting chaired by the then Chairman of the University Grant's Commission Professor Ranjith Mendis was also attended by Messrs Goran Schill, First Secretary of the Royal Swedish Embassy, and Abu Y.M. Selim Country

Director, United Nations Development Programme. The publication was commented on by Professor P. Senanayake, then Dean of the Faculty of Arts at the University of Colombo.

More detailed information on seminars and workshops attended by researchers through project sponsorship is given in the report by Professor Deheragoda. The range of topics covered by the papers listed in the report is truly impressive and is indicative of the contribution of the project to the institution of a research culture at the University of Sri Jayewardenepura.

2.6. KEY ACTORS

This write up would be incomplete without reference to the key Swedish and Sri Lankan actors who made a significant contribution to project implementation. Our first contacts in Sida Stockholm were Messrs Thomas Kjellqvist and Afzal Sher. Thomas Kjellqvist was research officer at the time and Afzal Sher was responsible officer for the Sri Lanka programme at Sida. Both of them were not only enthusiastic but extremely helpful. I still recall Thomas accompanying us to Uppsala to introduce us to colleagues there including Dr. Clas Lindberg who was to perform a yeoman service as Coordinator of the Project at the Uppsala end. It was also at the meeting in Uppsala that we first met Professor Anders Narman. As I recall sometime into the second year of the project Dr. Per-Einar Troften took over the task of overseeing the project on behalf of Sida/Stockholm. He was a person very easy to work with and took a sustained interest in project outcomes. Dr. Troften, in fact, on one occasion accompanied us on a field visit to our study locations in the North Central Province to gain an insight into the issues that were of central concern to the project. He was succeeded by Dr. Anders Clarehall as Senior Research Officer. About the same time Mr. Goran Schill was sent to the Swedish Embassy with responsibilities for financial supervision of Sida/SAREC projects in Sri Lanka. Goran Schill later became second secretary and then first secretary at the Swedish Embassy before completing his term in Sri Lanka. We

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would like to give him credit for negotiating with the University Grants Commission and the government establishment in sorting out various regulatory matters. Anders Clarehall was succeeded by Ms. Ros Marie Balow and this happened at the time that project responsibilities were being handed over to Prof. Krishan Deheragoda. She had shown great understanding and had been very facilitative of project activities particularly in its concluding phase.

On the academic front Dr. Clas Lindberg coordinated the activities of the project at the Uppsala end and did an excellent job in facilitating the visit of doctoral students and senior researchers to Sweden. It was also his responsibility to recommend supervisors from Sweden for our graduate students. He also acted as a supervisor in his own right. Over the long period of time that the project has been in existence he has worked with resolve to lend support to the project.

Professor Lennart Stromquist made a significant contribution to the project by assisting us to set up the GIS facility. He also did his utmost to arrange for the training of our graduate students in GIS both in Sweden and in Sri Lanka by making available to us the expertise available with the Department of Earth Science and also at the Institute of Archaeology at Uppsala University.

Professor Sune Berger was instrumental in making Karlstad University a partner in the research cooperation. He did his utmost to contribute to the project within the limits of resources available to him.

Professor Anders Narman's direct involvement was with the Sida supported Kelaniya University Project, but was very closely associated with the implementation of our project activities. His sudden demise came as a rude surprise to many of us. The appreciation written by Dr. Clas Lindberg and included in our Fourth Publication referred to above, of which he was co-editor, tells poignantly of the void left by him. Given below are a few excerpts from Clas' appreciation.

His contribution to the project was more than substantial. His knowledge, experience and his personal engagement and enthusiasm became a driving force in our work (...) Anders was known as both a leading scholar in development theory, a devoted field worker and an excellent lecturer-a rare and precious combination in academic quarters (...) When other people saw difficulties and huge work-loads, Anders saw possibilities and challenges. Giving up was never an option for him.

Professor Emeritus Gunnar Olsson's association with the project was somewhat distant at first. He was later drawn into the project with one of the graduate students initiating studies on the conflict affected internally displaced. We are indeed fortunate to have had this eminent geographer who was felicitated by the Association of American Geographers as one of our project counterparts. He had been an enthusiastic supervisor and an ardent field worker. We have had many insightful dialogical excursions into the field of Geography and subjects of socio-political interest both here and in Sweden.

Professor Ali Nagib had been one of our early associates and gave of his best as a counterpart project member. He was extremely helpful as a supervisor and even after he had withdrawn from playing an active role in project activities was ever ready to assist the project informally. We have been enthralled by his personal narrative of working his way as a young boy from a Moroccan village through France and Northern Europe to Sweden, overcoming many trials and tribulations. Perhaps it is this which has made him what he is- a person full of anecdotes, sense of humour and empathy.

On the our side exemplary commitment was shown by Professors Dhammika Wanasinghe and MDC Abhayaratne who functioned as team leaders of the two project components until around 2003/2004. They were helpful in implementing the field surveys and in assisting in the compilation of the publications. It was on the initiative of Professor Wanasinghe that the Master's Programme in Human

Security was instituted. Last but not least Professor Krishan Deheragoda, my successor as Project Leader, has managed and guided the Project to a successful conclusion for which he deserves many plaudits. He has also overseen the successful completion of the doctoral programmes in the latter phase of the project.

2.7. PROJECT CONSTRAINTS AND LIMITATIONS

While we can be justly proud of project achievements it would also be useful to look at the constraints and limitations that it had to contend with. The practice of applying general government financial regulations to project procurement by the University was a persisting problem. This led to considerable delays in project implementation. What is interesting is that article 194 of revised guidelines on Government Tender Procedure for Foreign Funding Agencies Assisted Proposals states that "procurement guidelines mandated by a particular foreign financing agency should be adopted on projects funded by them". In view of logistics problems, the time spent by graduate students in Sweden, under the split arrangement was far too short. This has been one of the reasons for the delays experienced in the completion of doctoral theses. A longer exposure to the Swedish research environment would have benefited them in other ways too. At times the conditions in the field tended to undermine the implementation of field studies on schedule. The project also failed to initiate any worthwhile collaborative research studies in which the Sri Lankan and Swedish researchers participated. The fact that Karlstad had no funds of its own to support the research collaboration, but had to depend on Uppsala funds was also restrictive of project activities. There could also have been more involvement of academics from the Department of Social and Economic Geography in the research cooperation activities.

2.8. OVERALL ASSESSMENT

In this brief retrospective write up it would also be worthwhile to reflect on the outcomes of the research cooperation. It is a matter for pride and satisfaction that it has contributed to enhance professional advancement of several colleagues in the Departments of Geography and Economics at the University of Sri Jayewardenepura by providing for Master's and Doctoral level research training. Furthermore, some thirteen middle level officials of government and non-governmental organizations have been provided with theoretical training in the concepts of human security through the taught Masters Programme (though only twelve completed the degree) to enable them to play a proactive role among the more vulnerable, marginalized and displaced communities particularly in the peripheral regions of Sri Lanka.

The research cooperation has also contributed to expand the research capability of the University of Sri Jayewardenepura while also creating space for interdisciplinary research. Colleagues from the Faculties of Applied Science, Management Studies and Commerce and Medical Science were associated in some of the research studies of an interdisciplinary nature undertaken through the project such as poverty and child labour, coping with problems of food security, grass roots institutions for rural development, and role of information technology in local development. The project has also seen the creation of a dynamic research environment in the Department of Geography.

The research cooperation also provided opportunities (attendance at seminars, conferences and workshops, participation in training programmes some of them tailor made, meeting with foreign scholars etc.) for research students and academic staff (both within and outside the Department) for much needed international exposure.

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In addition to human resource development the project in no uncertain terms contributed to upgrade and develop infrastructure facilities for research in the Department of Geography by providing for the acquisition of a GIS facility. In more recent times the Department has also been servicing the GIS requirements of University researchers from departments other than the Department of Geography.

Another important outcome of the project has been that it has enabled research networking along a North/South Axis as demonstrated by the links that the Department of Geography at the University of Sri Jayewardenepura had established with Swedish universities, in particular Uppsala, Gothenburg, and Karlstad and to a lesser extent Lund. However, the South/South research networking that the project intended to promote failed to materialize in view of practical difficulties. In my view and in the view of many others the project could be seen as one of the best examples of a North/South Research Cooperation.

In the final analysis, and importantly, the project has enabled the Department of Geography at the University of Sri Jayewardenepura to emerge as a leading centre for regional and poverty studies within the university system in Sri Lanka.

2.9. FUTURE CHALLENGES

While we can justifiably be proud of project achievements new challenges have emerged. Sri Lanka as a country emerging from conflict is facing not only problems of spatial development but also of social reconstruction and national integration. It is important that the Department of Geography of the University of Sri Jayewardenepura with its new found expertise in the areas of regional development and poverty alleviation takes the initiative to assist in governmental efforts in this direction through action research, policy reviews, advocacy and other means. Making this possible is a challenge that lies ahead for the Department of Geography.



SECTION THREE

SRI LANKA: LAND OF CHANGE AND CHALLENGE

by

PROFESSOR KRISHAN DEHERAGODA

Department of Geography - USJ - Sri Lanka

3.1. GEOGRAPHY OF SRI LANKA

Geographic Location

Sri Lanka's geographical location is 6° - 10° North latitude and 80° - 82° East longitude. It is situated in close proximity to the southern tip of India. During the geological past, Sri Lanka geophysically and geomorphologically was linked to the Deccan Plateau that formed part of Gondwanaland. According to Alfred Wagner's theory of Continental Drift, separation of land masses resulted in the creation of different continental areas such as Eurasia, Africa, Australia, North and South America. Sri Lanka had separated from India in geologically recent times.



Geological / Geomorphological Evolution of Sri Lanka

According to Adams (1929) a Canadian Geologist the evolution of the island of Sri Lanka had occurred in three stages: Highlands (*the Core*) as the first stage, Intermediate Uplands as the second stage and the surrounding Coastal Plain as the third stage. Presenting the Theory of Block Uplift, Wadia (1945) and Kularatnam (1952) were of the opinion that the Coastal Plain was formed first, Intermediate Uplands second and the Highlands last (*or at the third stage*). Later studies by

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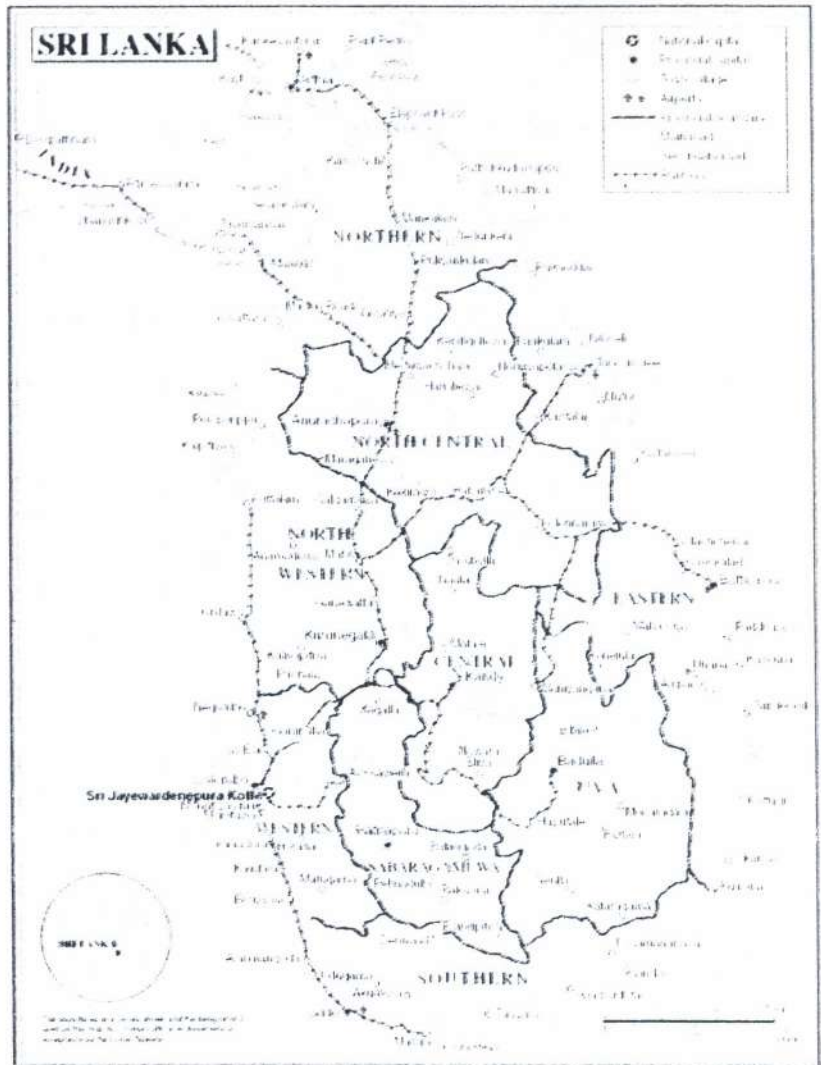
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Vithanage (1957) and Cooray (1964) supported the Block Uplift Theory with modifications as according to Panditharatne (2010).

Approximately about 90% of the land mass of the island of Sri Lanka is covered with Pre Cambrian rocks (*Metamorphosed Sediments, Granite and Genesis*) grouped into the Vijayan Series, Highland Group and South Western Group. Miocene sedimentary beds constitute the geology of the North and North West while coastal sandy deposits



occupy the Eastern and the North West Littoral. Alluvial deposits are found in valley floors and flood plains.

Associated with surface geology is the ground water potential. Crystalline hard rock areas indicate moderate, low to very low content of water. Areas under Miocene limestone have large to moderate and alluvial flats moderate ground water content and alluvial flats moderate ground water content.

Until very recently geomorphologists and geologists were of the opinion that Sri Lanka had a solid geological foundation with Pre Cambrian deposits and it was free from volcanic activities and earthquakes. The Tsunami of 2004 in the wake of the earthquake in West Sumatra, which recorded >9 on the Richter's scale affected very adversely the East, North East and Southern coasts of the island, causing heavy human and material losses unprecedented in the history of Sri Lanka. Tsunami has brought about a drastic change of views on Sri Lanka's vulnerability to earthquake activities. This vulnerability holds true for the Indian Ocean in the South, South East and East of Sri Lanka as well.

Weather and Climate

Sri Lanka is a country with a tropical climate. Its latitudinal location between 6° - 10° North of the Equator places Sri Lanka within the "A" climate in the Köppen classification. It is defined as an Equatorial/Tropical climate with high temperatures and humidity throughout the year. On the basis of altitude the average temperatures varies from 26.5°C to 29.1°C in the "Low Country" and 15.4°C to 24°C in the "Up Country." Diurnal variations of temperatures are considerable but the seasonal variations are not significant. However, being an island Sri Lanka enjoys comparatively moderate temperatures.

High temperatures and high humidity cause convectional circulation, which intensifies with the positioning of the Inter Tropical Convergence Zone (ITCZ) resulting in convectional rainfall during the Inter Monsoonal periods (March – April and October - November).

Sri Lanka is placed within the world's Trade Wind Circulation Zone lying between $0-30^{\circ}\text{N}$ and $0-30^{\circ}\text{S}$ and hence subject to the North East Trades (North East Monsoons) during November to February, influencing the weather and climate of the North and Eastern areas of the island. During May-July the South



East Trades which cross the Equator blows as South West Trades (*Monsoons*) influencing substantially the climate of the South Western quadrant of Sri Lanka.

Vegetation (Flora & Fauna)

The vegetation of Sri Lanka has attracted a great deal of attention throughout history. The existence of diverse vegetation within a relatively small area may be the key to this interest. The distribution of the major vegetation types (*Tropical*

Rainforests, Tropical Wet Lowland Rainforests, Tropical Montane Forests, Tropical Sub-Montane Forests, Tropical Monsoon Forests, Tropical Dry Mixed Evergreen Forests, Tropical Moist Evergreen Forests, Tropical Thorn Forests, Tropical Savannas, Grasslands, Wet Patana Grasslands, Dry Patana Grass Lands, Talawa Grasslands, Arid Grasslands, Damana



Sinharaja Rain Forest, IUCN Management Category II (National Park), Biosphere Reserve, Natural World Heritage Site - Criteria ii, iv

Grasslands, Villu Grasslands and a large Variety of Marine, Riverine Vegetation, Freshwater Vegetation etc.) may be considered as broadly linked to the local climate (*mainly rainfall and temperature*), topography, and the endemic conditions.

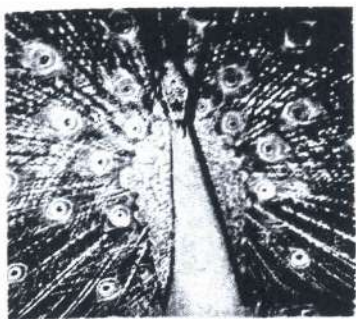
Sri Lanka – Western Ghats Biological hotspot, with its unique assemblage of plant and animal communities, is the most recent member of 25 Global hotspots. Although a close relationship would be expected between the biotas of southern India and Sri Lanka, recent studies suggest that Sri Lanka is a significant centre of endemism



"Nil Manel" (Water Lily) National Flower of Sri Lanka

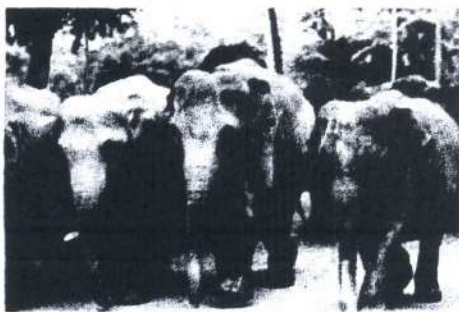
with its own characteristics. Its rich and diverse flora consists of 4,143 species of

flowering plants classified in 1,522 genera and 214 families. About 75% of the species are indigenous, while the rest are exotic. Of the exotics about 32% are naturalized to varying degrees, while about 68% are found only under cultivation (Senaratne cited in National Atlas -2007).



The high diversity of ecosystems in the country has resulted in a wide array of habitats occupied by a broad range of species that contain many climatic and edaphic variants particularly among the plants. This diversity of the ecosystem in Sri Lanka has resulted in species diversity, especially in respect of

mammals, birds, amphibians, fresh water fishes, as well as several groups of invertebrate fauna including butterflies, dragonflies, carabid beetles, spiders, rotiferans, and land snails. Among the terrestrial mammalian fauna are 90 indigenous species with 14 endemic species, and 10 introduced species. They comprise about 3000 Elephants, Leopard, Deer, Sloth Bear etc. Sri Lanka has 435 species of birds. While 23 of its 227 resident species are endemic, there are a further 195 migrant, pelagic and incidental species. About 25% of the country's forest related habitats have been declared as protected areas.



Rivers and Reservoirs

Sri Lanka is blessed with an extensive network of rivers and streams, which drains radially from the central hills in all directions into the Indian Ocean along 103 distinct river basins. In length, these flowing water bodies cover more than 4,500km. The Mahaweli, Walawe, and Kelani Rivers originate from



the central highlands, and flow through all three peneplains. The river basins originating in the wet highlands are perennial, while many of those in the dry zone are seasonal. The river Mahaweli covering 16% of the island accounts for the largest basin, with high socio-economic and ecological value.

In the absence of natural lakes, there are over 35,000 numerous ancient irrigation tanks that are scattered throughout Sri Lanka. These manmade wetlands demonstrate the island's rich cultural heritage and the Hydraulic Civilization that lasted for more than 2500 years. The major irrigation reservoirs (*each more than 200 ha*) cover an area of 7,820 ha, while the seasonal or minor irrigation tanks (*each less than 200 ha*) accounts for 52,000ha.

People

Sri Lanka is a multi-ethnic, multi-religious and multi-lingual country with a total population of 20 million. The major ethnic groups consist of the Sinhala (73.9), Sri Lankan Tamils (12.7%), Indian Tamils (5.5%), Moors (7.1%) and all others (0.8%). Of the total population 69.3% is Buddhist, 15.5% is Hindu and 7.6% is Muslim. Buddhism is mainly the religion of the Sinhalese, while the majority of Tamils and Moors are Hindus and Muslims respectively. The Christians and Catholics (7.6%) are mainly represented by the Burgher community (*descendents of the Europeans*). Among the Christians and Catholics there are also people of other communities except the Moors. Sinhalese language is mainly spoken by the Sinhala Community while Tamil is mainly the language of both the Tamils and Muslims. English is considered the link language and widely spoken and used in day to day life in administration, business, social and community life.



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Table 1. SRI LANKA COUNTRY PROFILE	
Full Name: Democratic Socialist Republic of Sri Lanka	
Temperature: Low Country 24.4 – 31.7 C ⁰ & Up Country 24.4 – 31.7 C ⁰	
Area: 65,610 sq km	
Population: 20.4 million (UN, 2009); Growth Rate (%) 1.1	
Ethnic Composition (%)	Religious Composition (%)
Sinhalese: 73.9	Buddhist: 69.3
Sri Lankan Tamils: 12.7	Hindus: 15.5
Indian Tamils: 5.5	Muslims: 7.6
Moors: 7.1	Christians: 7.6
Others: 0.8	Others: 0.1
Major Languages: Sinhala, Tamil, English	
Capital: Colombo (commercial), Sri Jayewardenepura (Administrative)	
Largest City: Colombo (1 Million Population)	
Life Expectancy: 70 years (Men), 78 years (Women) (UN)	
Literacy Rate 1999-2007 (%) : 92.7 (Male), 89.1 (Female) (UN)	
Human Development Index: 0.759 (Min.0.0, Max 1.0)	
Monetary Unit: Sri Lankan Rupee (SLRS 115.00 = 1.00US\$)	
GDP Per Capita: US\$ 2,053 (IMF, 2009)	
Sectoral Composition of GDP - 2009 (%)	
Agriculture: 12.0	
Industry: 28.7	
Service: 59.3	
Main Exports: Clothing and Textiles, Tea, Gems, Rubber, Coconuts	
Unemployment, % of Labour Force: 6.5 (2006), 5.8 (2009)	
Inflation Change of CCIP Annual Ave. (%) : 10.0 (2006), 3.4 (2009)	
External Assets (US\$ Mn) : 4,005 (2006), 7,030 (2009)	
External Debt (US\$ Mn) : 11,981 (2006), 18,662 (2009)	
Internet Domain: .lk	
International Dialing Code: +94	

As per the social development and quality of life indicators, and achieving of the MDG, Sri Lanka stands well above all the developing countries. It is second only to Japan in the SAARC and Asia –Pacific regions.

The education up to the university level and the health services are provided free of charge in Sri Lanka. The languages taught in schools are Sinhalese and Tamil. English medium streams are available in most of the urban schools and the international schools.

3.2. HISTORY OF SRI LANKA

Prehistory of Sri Lanka

The earliest archaeological evidence of human colonization in Sri Lanka appears at a site found in Balangoda. The Balangoda Man arrived in the island about 34,000 years ago. He is identified as a Mesolithic hunter-gatherer who was used to living in a cave. Several of these caves including the well known Batadombalena and the Fa-Hien Rock cave have yielded many artifacts used by these people- currently the first known inhabitants of the island.



"Ptolemy's Map of Thaprobane (Sri Lanka),
2C. AD.

The Balangoda Man probably was responsible for the creation of Horton Plains, in the central hills, by burning down trees in order to hunt game. However, the discovery of oats and barley on the plains at about 15,000 BC suggests that agriculture had already developed at an early date (Daraniyagala 2004).

Several minute granite tools (*about 4 centimeters in length*), earthenware, remnants of charred timber, and clay burial pots date to the Mesolithic stone-age. Human remains dating to 6000 BC have been discovered during recent excavations around a cave at Varāna Raja Maha vihara and in Kalatuwawa area.

Cinnamon, which is native to Sri Lanka, has been found in Ancient Egypt as early as 1500 BC, suggesting early trade between Egypt and the island's inhabitants. It is possible that Biblical Tarshish was located in the island (Tennent 2009). The pre-historic Early Iron Age appears to have established itself in South India by at least as early as 1,200 BC, if not earlier (Possehl 1990; Deraniyagala 1992). The earliest manifestation of this in Sri Lanka is radiocarbon dated to ca. 1000-800 BC at

Anuradhapura and Aligala shelter in Sigiriya (Deraniyagala 1992; Karunaratne and Adikari 1994; Mogren 1994), the Anuradhapura dating is now corroborated by Coningham (1999).

Archaeological evidence for the beginnings of the Iron age in Sri Lanka is found at Anuradhapura, where a large city-settlement was founded before 900 BC. The settlement was about 15 hectares in 900 BC, but by 700 BC it had expanded to 50 hectares (Deraniyagala 1994). A similar site from the same period has also been discovered near Aligala in Sigiriya (Karunaratne, and Adikari 1994). Around 500 B.C. Sri Lankans developed a unique hydraulic civilization. Achievements include the construction of the largest reservoirs and dams of the ancient world as well as enormous pyramid-like Stupa (*Dagoba*) architecture. This phase of Sri Lankan culture was profoundly influenced by early Buddhism. Pottery has been found in Anuradhapura, bearing Brahmi script and non-Brahmi writing, dating back to 600 BC – one of the oldest examples of the script.

The Pali chronicles, the Deepavamsa, Mahavamsa, Thupavamsa and the Chulavamsa as well as a large collection of stone inscriptions (Halliday and Róheim 1933), the Indian Epigraphical records, the Burmese versions of the chronicles etc., provide an exceptional record of the history of Sri Lanka from about the 6th century B.C. According to the Mahavamsa, Vijaya landed in Sri Lanka near Mahathitha (Manthota or Mannar, and named the Island "Thambaparni" (*copper-colored palms*). This name is attested in Ptolemy's map of the ancient world. The Mahavamsa also describes the Buddha visiting Sri Lanka three times. Tamirabharani is the old name for the second longest river in Sri Lanka (*known as Malwatu Oya in Sinhala and Aruvi Aru in Tamil*). This river was a main supply route connecting the capital, Anuradhapura to Mahathitha (*Mannar*). The waterway was used by Greek and Chinese ships that followed the southern Silk Route.

The present day Sinhalese and many Tamils are a mixture of the indigenous people and of other people who came to the island from various parts of India. The Sinhalese recognize the Vijayan Indo-Aryan culture and Buddhism, as distinct from Dravidian groups in neighbouring south India.

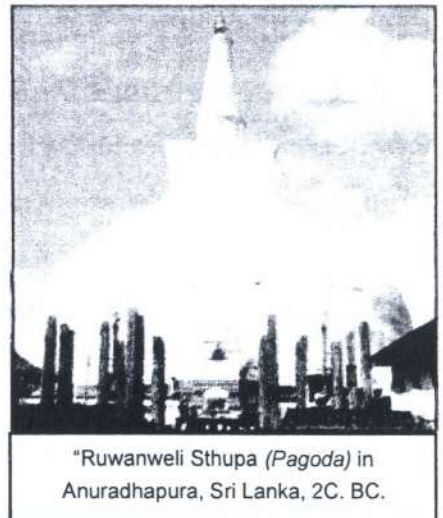
In the early ages of the Anuradhapura Kingdom, the economy was based on farming. People made their early settlements mainly near the rivers of the east, north central, and north east areas, which supplied the water for farming through the whole year. The king was the ruler of country, administrator of the law, commander of the Army and protector of the faith.

Modern History of Sri Lanka

There are archaeological evidences and chronicles written by Sri Lankans and non-Sri Lankans, exploring the history of more than

10,000 years. The archaeological discovery of the *Balangoda Man* provides evidence of 30,000

years old past civilization. The famous chronicles of Sri Lanka, the "Mahawamsa", "Deepavamsa", "Chulavamsa" and the "Rajavaliya" have recorded Sri Lankan history from the beginnings of the Sinhalese monarchy in the 6th century BC to the arrival of European colonial powers in the sixteenth century, and until the disestablishment of the monarchy in 1815.



"Ruwanweli Sthupa (Pagoda) in Anuradhapura, Sri Lanka, 2C. BC.

After the sixteenth century, some coastal areas of the country were ruled by the Portuguese (1505 -1856), the Dutch (1856 -1796) and the British (1796-1948). After the year 1815 the entire nation came under the rule of the British Empire. The granting of Dominion Status was followed by political Independence in 1948, due to the constant agitation for independence by all communities, collectively. Sri Lanka became a sovereign state in 1972 by changing the 1948 constitution. Once

again in 1978, a new constitution was adopted by which an Executive President became the elected Head of State.

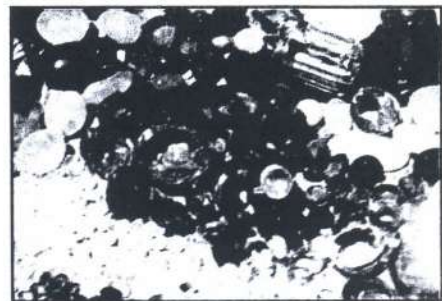
There was an insurgency, led by the Sinhalese youth of the South in 1971 to topple probably the strongest democratically elected government of the post independence Sri Lanka. This was brought under control within a few weeks. However the brutal insurgency campaign led by the Tamil Youth in the North claiming a separate state, followed by the ethnic riots of 1983 continued for almost three decades, until it was militarily defeated in 2009. In-between another armed youth uprising by the Sinhalese youth in the South took place in 1987 to 1989 which was more violent and destructive than the first uprising and claimed an estimated number of 60,000 lives. But the biggest tragedy in the history of Sri Lanka in terms of: human and material losses; social and economic damage; disintegration of human, social and livelihood security, ethnic harmony, and human suffering was unleashed by the terror campaign of the terrorist outfit of the Liberation Tigers of the Tamil Elam (LTTE). It was most brutal and

unprecedented and was responsible for bringing untold sufferings to the Tamils of North and East by holding them captive by the LTTE. The LTTE also inculcated fear and brought death to thousands of innocent people in the other areas of the country by carrying out violent attacks on civilian targets.



3.3. POST CONFLICT SRI LANKA

Nearly three decades of the separatist-terrorist campaign by the LTTE against the Government and the people of Sri Lanka was brought to an



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end in May 2009. LTTE terrorism had a serious negative impact on social, cultural, and moral values including the human security of the people. It also seriously undermined the economical, environmental, regional and infrastructural development of the country. Over 280,000 Tamil people have been rescued from the clutches of the LTTE during the last phase of the battle by the Sri Lanka Government Forces. Taking care of the Internally Displaced Persons (IDP) and resettling them in their original places of residence, after clearing Landmines and Unexploded Ordnance (UXO) in those areas and the re-establishment of their identities had been the greatest and immediate humanitarian challenge that Sri Lanka faced after the liberation of the areas that were under LTTE control. By now, this mission has been completed and only about 28,000 remain to be resettled. They are to be resettled by end of 2010, completing one of the worlds' most complex and well executed resettlement programmes. Further, the rehabilitation of the child soldiers and many others who were forcefully recruited into the LTTE fighting cadres was another challenge. Almost 85% of the child soldiers are now being handed over to their parents after rehabilitation. They have already either commenced their secondary education in schools or have commenced vocational training in technical colleges or other skills development centres. Many youths have been provided with employment by the private sector organizations after the completion of their rehabilitation and vocational training.



3.4. GLOBAL RESPONSE

With the beginning of post conflict era of Sri Lanka in 2009, the country has shown a tremendous improvement in all spheres of Social and Economic development. The country's per capita income has passed US\$ 2000 mark and the GDP growth rate jumped from 2.5% to 4.0% of average recorded during the past three decades to 8.5% by the third quarter of 2010. It is envisaged to achieve 9% - 12% GDP

growth during the next five years. Already the Colombo Stock Exchange has been classified in the world ratings as the fastest growing one, showing no signs of negative impacts of the current global financial crisis.

With the fast and steady recovery of Sri Lanka from the wounds of the conflict, its ranking in the international standing has remarkably improved. Sri Lanka was ranked as the best country in the South Asia by the latest UNDP report in terms of improvements in the social development indicators and achieving MDGs. It was also rated as the number one tourist destination by the 'New York Times' in its list of "31 Places to go in 2010". In a list that encompasses some of the most exotic and exclusive getaway locations including Bali and Manhattan, Sri Lanka takes the top rank, according to the New York

Times. This comes in the wake of the recent spate of positive reviews that Sri Lanka has received from world's most authoritative sources. Just days after the above ranking, a leading lifestyle web resource, Daily Candy, weighed in with a similarly enthusiastic travel recommendation, praising Sri Lanka as "the best place ever been".

Many Countries of North America including USA, Canada, Mexico and the European Union including U.K., France, Germany, Sweden and Norway as well as the other countries like Japan, Australia, South Africa, China and India have removed the travel advisory notifications against Sri Lanka, particularly in visiting the Northern and Eastern areas. As a result, Tourist arrivals in the country increased sharply from May in 2009 with the defeat of terrorism, ending Sri



Lanka's 30-year war. Sri Lanka is among the 10 top most affordable destinations in the world, according to the "German-language Yahoo Travel Magazine". Meanwhile travel analysts expect that in 2010 the global tourist industry will return to its pre-crisis levels with growing interest towards event tourism. Accordingly, Sri Lanka is expecting 600,000 tourists by end of the year 2010 and 2.5 million by 2016. Recently, the commentators, Times Travel Magazine Writer Jil Crawshaw and Editor of Wandertrust Magazine described Sri Lanka as 'definitely the best place to visit'.

The National Geographic Channel recently in an exclusive report based on a survey carried out in mid 2010 by the "Center for Sustainable Destinations" affiliated to the National Geographic Magazine, has placed Sri Lanka as Second Best among the "National Geographic's World's 20 Best Destinations". The National Geographic Adventure too has ranked Sri Lanka as the Second Best New Trips for 2010 out of 25 countries, accrediting the country as the "Wonder of the World."

The Global Services Location Index (GSLI) analyzes and ranks top 50 countries worldwide as the best destinations for providing outsourcing services, including IT services and support, contact centers, and back-office support. Each country score is composed of a weighted combination of relative scores on 43 measurements, which are grouped into three categories: financial attractiveness, people skills and ability and business environment. Sri Lanka is ranked number 16 in the index in 2009 compared to number 29 position held in 2007. This is a significant jump of 13 positions and only one or two other countries have achieved similar level of upgrading of rank. This situation was just after the end of conflict in Sri Lanka. The actual ranking would be even higher now.

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Table 2. SRI LANKA AND SAARC COUNTRIES

Indicator	Ref. Year	Sri Lanka	Afghanistan	Bangladesh	Butan	India	Maldives	Nepal	Pakistan
Population (Mn)	2008	20.2	25.0	142.4	0.7	1,150.0	0.4	28.2	164.6
Population Growth	2008	1.1	2.0	1.3	1.9	1.5	1.8	2.3	1.8
Land Area (000 Sq.Km)	2009	65.6	652.1	130.2	47.0	2,973.2	0.3	143.0	770.9
Population Density (persons per Sq.Km)	2008	321.9	38.3	1,093.7	14.9	386.8	1333.3	197.2	213.5
Crude Birth Rate (per 1,000)	2007	19	49	25	19	24	23	28	27
Crude Death Rate (per 1,000)	2007	6	19	8	7	8	6	8	7
Infant Mortality Rate (per 1,000 live Births)	2008	13	165	42	50	52	16	41	72
Maternal Mortality Rate (per 100,000 live Births)	2005	58	1,800	578	440	450	120	830	320
Expectation of Life at Birth (years)	2007	74	43.6	64.0	66	65	69	64	65
Population under Poverty (%)	2007	15	36	36	23	28	16	25	24
Per Capita GDP Income (USD)	2007	1,634	335	599	272	1,030	2,287	473	492
Arable Land (Agricultural) % of Total Land Area	2005	14.2	12.1	61.1	3.4	53.7	13.3	16.5	27.6
Forest Cover, % of Total Land Area	2005	29.9	1.3	6.7	68.0	22.8	3.0	25.4	2.5
Hospital Beds per 10,000 People	2007	31.0	n.a.	3.0	16.0	9.0	23.0	2.0	10.0
Land Telephones per 1,000 Persons (Main Lines)	2007	142	3	7	45	34	109	27	30
Land Telephones per 1,000 Persons (Mobile Phones)	2007	413	172	217	172	200	1,040	42	481

3.5. SWEDEN - SRI LANKA RELATIONS

Sri Lanka established diplomatic relations with Sweden in November 1949. The resident Mission in



Stockholm was established in August 1970 and the first Resident Ambassador presented credentials in the same year. The Swedish Embassy in Colombo was opened in 1980. Sri Lanka is maintaining very cordial relations with Sweden.

Bilateral Trade

The bilateral trade between Sri Lanka and Sweden has expanded during the past decade. But the balance of trade (*BOT*) had been favourable for Sweden for several years.

Exports & Imports

Sri Lanka's main export products are Rubber and Rubber products, Tea, Ceramic items, Garments, electrical machinery and accessories. The exports from Sri Lanka to Sweden record an upward trend in the recent past. Sri Lanka's main import goods from Sweden are Telecommunication apparatus, Resins, Plastic Materials, Paper and Paper products.

Investment

Swedish Foreign direct Investment (*FDI*) in Sri Lanka recorded considerable growth in the recent past. It shows that the Swedish investment in Sri Lanka in 2005 increased by 52.7% compared to 2004. Swedish investments in Sri Lanka mainly focus on Information Technology, Telecommunication, Garment and Rubber sector. Major Swedish companies such as Trelleborg AB, IFS, Ericsson AB and Oriflame are operational in Sri Lanka.

Development Cooperation

The Swedish development cooperation activities are carried out by the Swedish International development Agency (Sida). The development co-operation in Sri Lanka was started in 1958 and Swedish support was directed towards Sri Lanka's family planning activities, hydroelectric power, education and rural development. A development co-operation office was opened in 1976 and Swedish assistance was extended to research co-operation, hydro power development, education and integrated rural development. In the late 1980s, Swedish assistance was extended to fund Integrated Rural Development Projects (*IRDP*) in many districts in Sri Lanka. More recently the development co-operation has supported peace, democracy and economic growth.

Sida/SAREC Research Cooperation

One of the fundamental tasks of Sida's Department for Research Cooperation, SAREC, is to provide assistance for strengthening national research capacity in developing countries. Swedish support to research cooperation with Sri Lanka dates back to 1976. Over the years, bilateral research cooperation between Sri Lanka and Sweden has gradually shifted from provision of small research grants managed by national organizations like the MARGA Institute and the National Science Foundation (*NSF, earlier NARESA*) to long-term scientific cooperation and partnership between Sri Lankan and Swedish institutions.

The current program for research cooperation covers 13 projects run by Sri Lankan universities and administered by the University Grants Commission (*UGC*) and NSF. Support efforts target a wide range of sciences: biotechnology, biochemistry, electrical engineering, marine ecology, regional development/poverty alleviation, university staff development, library development, ICT etc. The Sida/SAREC Research Project on Regional Imbalances and Poverty Alleviation at the Department of Geography of the University of Sri Jayewardenepura is one of such projects, now concluding with a great success.

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SECTION FOUR

REVIEW ON Sida/SAREC RESEARCH COOPERATION PROJECT BETWEEN USJ/DEPARTMENT OF GEOGRAPHY AND SWEDISH COLLABORATING INSTITUTION-UPPSALA UNIVERSITY DEPARTMENT OF SOCIAL & ECONOMIC GEOGRAPHY

by

PROFESSOR KRISHAN DEHERAGODA

Project Leader

4.1. PROJECT BACKGROUND

In 1998 University Grant Commission of Sri Lanka called for research proposals from all universities to be funded under the Sri Lanka- Sida/SAREC agreement. The proposal submitted by a team led by Prof. M.M.Karunanayake of the Department of Geography of the Faculty of Arts – USJ under the heading Regional Imbalances and Poverty Alleviation one of the projects selected on a competitive basis for funding. This research and capacity building programme resulted in the collaboration between the Department of Geography of the University of Sri Jayewardenepura – Sri Lanka and the Department of Social and Economic Geography of the Uppsala University –Sweden. The project commenced in October 1998 and has continued uninterruptedly to date.

Project Title: Sida/SAREC Research Cooperation Project on Regional Imbalances and Poverty Alleviation

Project Phases:

Phase I	(1998-2002)
Phase II	(2003-2005)
Phase III (Extension Phase)	(2007-2010)

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Reporting System: Submission of following two reports to the SIDA Stockholm,
each year for formal approval.

Progress Report for the Past Year, and

Activity Plan for the Preceding Year.

Project Implementation Institution:

University of Sri Jayewardenepura (USJ)
Sri Lanka.

Collaborating Institutions:

Uppsala University and
Karlstad University, Sweden.

Name of Principal Investigator:

Investigator/s:

(Implementation Institution)

Prof. C.K.M. Deheragoda

Department of Geography,

University of Sri Jayewardenepura,
Nugegoda, Sri Lanka.

Tel: +94 11 2802028

Fax: +94 11 5524530

Email: krishan.deheragoda@gmail.com /

Name of Principal

(Collaborating Institution)

Dr. Class Lindberg

Department of Social and
Economic Geography,

Uppsala University,
Sweden.

Tel: +46 18 471 73 86

Fax: +46 18 471 74 18

Email: clas.lindberg@kultgeog.uu.se

Project Funding:

Sida Funding (SEK):

The funds were disbursed from the project account maintained by the
Faculty of Graduate Studies, University of Sri Jayewardenepura, Sri Lanka.

Table 3.

Sida/SARC FUNDS RECEIVED BY THE USJ/DEPARTMENT OF GEOGRAPHY FOR THE RESEARCH COOPERATION PROJECT (1998-2010)			
Budgeting Year (<i>Jan to Dec.</i>)	Conversion Rate (1 SEK to SLRS)	Amount of Funds Received	
		SEK	SLRS
1998a	11	1,003,021	11,033,238
1999a	11	0	0
2000a	11	975,378	10,729,163
2001a	11	1,047,903	11,526,937
2002a	11	0	0
2003a	11	0	0
2004a	11	143,687	1,580,560
2005a	11	292,916	3,222,079
2006b	11	670,000	7,370,000
2007a	11	1,114,636	12,261,000
2008a	17	678,577	11,535,801
2009a	17	435,860	7,409,614
2010b	17	0	0
Total		6,361,978	76,668,392
Source: "a" -University of Sri Jayewardenepura			
"b"- Sida/Stockholm			
Note: Information given in this table is subject to confirmation in the final financial verification by the authorities.			

Sida/SAREC Research Cooperation Project that commenced in October 1998 with policy relevant studies on Regional Imbalances and poverty alleviation. The rationale for studies in Regional Imbalances is derived by the need to rethink the Regional Development policy in Sri Lanka for the purpose of:

- a) establishing the relevance of a Regional Development approach to development;
- b) refocusing attention on the development of periphery to complement the present and future development of the 'core' region;
- c) determining the ways in which the political and economic processes at the regional level have to converge for better spatial distribution of the benefits of social and economic development;
- d) making Regional Development, 'people' and 'place' focused; and
- e) utilizing regional planning as a tool for national integration.

Project Objectives

The objectives of the project are to;

a) Spatial Objectives

Undertake in-depth research on issues relating to regional imbalances and poverty alleviation and to contribute to policy formulation in the Central and North Central Provinces (CP & NCP) and the District of Ampara in the Eastern Province.

b) Capacity Building Objectives

- Promote Human resource development through Ph.D , and Masters level training.
- Expand the capacity for policy relevant social science research relevant to Regional Imbalances and Poverty Alleviation, Social Reconstruction and National Reconciliation.
- Enable the development of the capacity for inter-disciplinary research.
- Upgrade the infrastructure base of the Department of Geography - USJ to strengthen research, training and teaching.

- Develop a GIS capacity and a data base on Regional Imbalances and poverty alleviation.

c) Research Objectives

- Undertake in-depth studies on poverty in Sri Lanka with special reference to the rural sector.
- Evaluate issues and constraints in Regional Development that affect spatial imbalances and constrain its national integration.
- Identify emerging issues to provide policy relevant recommendations and also publicize these through workshops, conferences and publications (*both National and International*) for public and academic debate.

Similarly, while there has been a concern for poverty alleviation, implementation strategies in Sri Lanka have often overlooked the deeper issues relating to poverty such as poverty derived destabilization of households, seasonal impacts of poverty, poverty thresholds, feminization of poverty, transfer of poverty related stress from men to women, poverty and its impact on environmental degradation and the cultural attributes of poverty as they shape the world view of the poor. The Project aims at investigation these issues at the micro level to help fine tune poverty alleviation strategies.

Framework of Analysis

- i. The project has been conceptualized in modular form with each module incorporating a particular theme. The research questions are developed with reference to these themes. The themes on Poverty include the following:
 - Theoretical perspectives.
 - Cultural of poverty.
 - Poverty and Survival strategies of the poor.

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-
- Poverty and food security.
 - Women and poverty.
 - Livelihood generation for the poor (with reference to micro enterprises).
 - Poverty and the environment (with special reference to ecological poverty)
 - Poverty policy and poverty alleviation strategies

ii. Similarly the **Regional Imbalances** have been conceptualized in terms of the following modules and themes viz.

- Evaluation of existing imbalances.
- Natural and human resources for Regional Imbalances.
- Industrial decentralization.
- Rural-urban linkages.
- Small and medium towns in Regional Imbalances.
- Decentralization, institutional development and governance.
- Plantations and the regional economy.
- Environmental management and Regional Imbalances.
- Regional Imbalances policies and strategies.

4.2. SIGNIFICANT ACHIEVEMENTS

a) Academic Achievements under the USJ-Uppsala University Split Programme:

- | | |
|--------------------------------------|------|
| ▪ Total Number of Ph.Ds Conferred | = 06 |
| ▪ Total Number of M. Phils Conferred | = 01 |
| ▪ Total Number of M.A Conferred | = 01 |

b) Academic Achievements under University of Sri Jayewardenepura Programmes:

- | | |
|-----------------------------------|------|
| ▪ Total Number of M.Sc. Conferred | = 12 |
|-----------------------------------|------|

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-
- Total Number of Diplomas Conferred = 01
 - Total Number of Academics Received Advance GIS Training = 16
 - Total Number of Non Academic s Received GIS Training = 02

d) Publications

- Books = 04
- Articles/Papers Published = 24
- Manuscripts = 03
- Conference Presentation = 40
- Special International Seminars Conducted = 03
- Key Note Addresses/Special Orations = 17
- Ongoing research projects = 10
- Awards / Special Achievements = 15

e) Special Achievements

- Establishment of State of the Art GIS Research Laboratory
- Establishment of State of the Art GIS Teaching Laboratory
- Establishment of a Departmental Library
- Establishment of a Wireless Whether Station
- Establishment of a Modern Seminar Room
- Equipment of the Soil Laboratory with new Scientific Testing Equipments and Geological Models.
- Equipment of the Map Library with latest Maps, Arial Photographs and Satellite Images.
- Equipment of the Cartographic Lab and the GIS Laboratory with GPS and other Equipments.
- Establishment of a Multimedia Facility including Projectors for Teaching Laboratories, Audio equipments, Video etc.
- Supply of a 52 Seat Field Work cum Research Station Bus.

4.3. PROJECT SUMMARY: CAPACITY BUILDING OUTPUTS

Thanks to the generous funding and facilitation received from the Sida/SAREC Stockholm enabled us to confer 6 Ph.Ds, 1 M.A and 1 M.Phil. Degree to the academic staff members of the both Geography and Economics Departments of the University of Sri Jayewardenepura, under the split programme with the Swedish collaborating institution – Department of Social and Economics Geography in the Uppsala University. Also we have been able to conduct a once for all 2 year M.Sc. Programme on Human Security and effectively confer 12 M.Sc. degrees under the auspices of our project, fulfilling the Capacity Building Objective of the project. Through this objective it was envisaged to increase the research and academic capacity of the teachers as well as to improve the technical and professional outlook of both academic and non academic members of the relevant departments of the USJ, by providing opportunities to conduct research at doctoral and masters level on the problems on regional imbalances and poverty in Sri Lanka.

Supervisory and training support of Swedish experts in several disciplines was provided particularly to Sri Lankan graduate students to conduct multidisciplinary research. The valuable contributions made by the Swedish colleagues like Emeritus Prof. Gunnar Olsson, Prof. Lennart Strömquist, Associate Prof. Ali Najib, Dr. Clas Lindberg, Dr. Susanne Stenbacka of the Department of Social and Economic Geography – University of Uppsala and late Prof. Anders Narman and Prof. Sune Burger of the Department of Geography - Karlstad University, Sweden are always remembered with deep appreciation and gratitude by all of us in Sri Lanka.

Postgraduate Training: Ph.D. Programme

(Split Model with Uppsala University)

Name of Research student	Gender M/F	Year Training Started	Ph.D Year of Completion	Title of Dissertation
1. Ratnayake, RMK	M	1999	2004	See below under 5.2
2. Wijesinghe, MA	M	1999	2004	
3. Withanage, DP	F	1999	2004	
4. Bandaranayake, GM	M	2003	2009	
5. Chandrakumara, DPS	M	2004	2008	
6. Rev. Pinnawala Sangasumana	M	2008	2010	

Ph. D. Thesis Titles:

Dr. Ratnayake, RMK

Land Tenure, Labour and Markets: A Study of Rural – Urban Linkages in North Central Sri Lanka.

Dr. Wijesinghe, MA

Micro-Enterprises in Sri Lanka: An Analysis of their Potential for Poverty Alleviation.

Dr. Withanage, DP (Ms.):

Imbalances in the Location of Industries and Its Impact on Regional Development of Sri Lanka.

Dr. Bandaranayake, GM

A Geographical Analysis of Positioning and Functionality of the Tank Cascade Systems of the North-central Province Sri Lanka.

Dr. Chandrakumara, DPS

Role of Family in Human Capital Formation: Implications for Poverty Reduction in Sri Lanka.

Rev. Pinnawala Sangasumana

Mapping Inbetweenness: The Case of Conflict Induced Internally Displaced in Sri Lanka.

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b) M.A. / M.Phil. Degree Thesis Titles:

Rev. Pinnawala Sangasumana (M.A.)

Thesis Themes:

Conflict and Internal Displacement in Sri Lanka: A Study of Two Communities in the Anuradhapura District.

Herath JMRJ - M.Phil. Ms.

An Analysis of Mass Movements in Kothmale Oya Catchment.

c) M.Sc. Degree in Human Security Conducted by the Department of Geography - USJ

Name of Student	Gender M/F	Year Training Started	Year of Completion	Title of Dissertation
1. Wijerathna, SD	M	2001	2005	See below
2. Vijayanathan, L	M	2001	2005	
3. Hewawickrama, CP	M	2001	2005	
4. Jayaweera, NC	M	2001	2005	
5. Samarasinghe, PKP	M	2001	2005	
6. Gnanaseelan, J	M	2001	2005	
7. Gunarathne, DML	M	2001	2005	
8. Gunarathne, NHV	M	2001	2005	
9. Premakumara, WMAS	M	2001	2005	
10. Alwis, EU	M	2001	2005	
11. Vithana, C	M	2001	2005	
12. Miranda, AER	F	2001	2005	
13. Senavirathna, GSAK	M	2001	2005	

M.Sc. Degree Thesis Titles:

Wijerathna, SD

Watershed management in Upper Catchments of Sri Lanka and its Impact on Farming Communities.

Vijayanathan, L

Violence in the Up Country Tea Plantations: A Socio-Political Analysis.

Hewawickrama, CP

Provisioning of Basic Needs for the Internally Displaced in Northern Sri Lanka: The Role of Non-Governmental Organizations.

Samarasinghe, PKP

Human Security Concerns of the Bandaranaike International Airport Expansion Project in Sri Lanka: An Analysis of the Human Security Issues of Communities in the Surrounding Area.

Gnanaseelan, J

Farmer's Survival Strategies in an ethnic Conflict Situation in Two Villages in the Vavniya District of Sri Lanka.

Gunarathne, MLD

Social Mobilization for Poverty Alleviation: A study of Rural Communities in the Polgolla D.S. Division of Matale District.

Gunarathne, NHV

Personal Security of Female factory Workers in the Katunayake Free Trade Zone of Sri Lanka.

Premakumara, WWMAS

A Study on Economic Security of Self-employed Women in a Low Income Community in the City of Colombo.

Alwis, EU

Study of Rural water Poverty on Household Income in the Dry Zone of Sri Lanka.

Miranda, AER (Ms.)

Displacement and its consequences in Two Villages in the Mannar District of Sri Lanka.

Vithana, C

An Assessment of the Impact of the Samanalawewa Hydropower Project on the Kaltota Village Society and Economy (*Degree Programme Completed but the Thesis has not submitted*).

Jayaweera, NC

An Assessment of Environmental Security in large-Scale Housing Projects in the Western Province of Sri Lanka (*Degree Programme Completed but the Thesis has not submitted*).

Senavirathna, GASK

Ensuring Food Security through Agro-based Food Processing: A Study of opportunities and Challenges (*Degree Programme Completed but the Thesis has not submitted*).

d) Special Training for the Academic and Non Academic Staff:

Academic Staff Received the Training Through the Project

Dr. Ratnayake, RMK (Senior Lecturer Grade I)

Dr. Wijesinghe, SW (Senior Lecturer Grade I)

Rev. Pinnawala Sangasumana (Senior Lecturer Grade II)

Dr. Thennakoon, S (Senior Lecturer Grade II)

Ms. Herath, B (Senior Lecturer Grade II)

Ms. Herath, J. (Senior Lecturer Grade II)

Mr. Kumara, BASC (Lecturer)

Followed Training Course on ArcGIS 9.3. Version & Advance ArcGIS Application Training at EMSO (Pvt.) Limited, Sri Lanka which is the sole agent of the USA based Mother Company of the ArcGIS, 2008 & 2010, respectively.

Special Sponsorships for the Academics

Prof. J. Katupotha (Department of Geography) was sponsored by the Project on a Special Study on "Geomorphological Influence of Glaciations in the Landscape Changes of Finland with a view to Make a Comparative Analysis with Sri Lanka", in July 2010.

Mr. Wiswakula, UHN (Senior Lecturer Grade II), Received Special training on Qualitative Research Analysis at Uppsala University, Sweden in 2005.

Mr. Kumara, BASC (Lecturer), Successfully Completed a Two Year Certificate Course in Geology at the University of Moratuwa – Sri Lanka.

Training: Non Academic Technical Staff of the USJ

Alwis, G. Technical Officer, Department of Geography USJ. Received One Month Training at Uppsala University, Uppsala, Sweden, on GIS based Cartography in 2001.

Ariyaratne, MND. Technical Officer, Department of Geography Technical Officer at the Computer Centre –USJ received One Week Training on ArcGIS 9.3. Version in 2009 and on Advance GIS Application 3 Day Training in 2010 at EMSO (Pvt.) Limited - Sri Lanka, which is the sole agent of the USA based Mother Company of the ArcGIS.

4.4. PROJECT SUMMARY: RESEARCH OUTPUTS

One of the objectives of this project was primarily to focus on the regional imbalances and poverty alleviation research in Sri Lanka with a view to identify policy relevant strategies for the end use. The regional development and poverty alleviation aspects have been given a special emphasis in the research works carried out by the project as investigation of these issues at the micro level was considered as necessary to help fine tune poverty alleviation within the context of regional development strategies in Sri Lanka.

In the light of the above, we have produced 4 publications on regional development and poverty issues with policy relevant mitigation strategies. Moreover, couple of dozen research works have been conducted and their findings were been presented in academic and research forums both nationally and internationally, realizing the research, awareness creation and dissemination of knowledge objectives of the project to its full potential.

The findings of the research carried out by both the academic staff members and the graduate students will guide policy makers to take rational decisions and introduce pro-poor regional development strategies. The research instruments

developed and validated for the local setting are now available for local use by future researchers and policy makers. Also, the results of this Sida/SAREC research projects had find their way to outside users in the public or private sector, as most of its research findings have been published or presented at both local and international seminars and conferences. The policy relevant research findings and strategies had been published in four volumes by the project, directly under its two main thrust areas, i.e. regional development and poverty alleviation.

a) **Books Published**

Book 1: Title - Poverty, Spatial Imbalances and Regional Planning in Sri Lanka: Policies and Issues,

ISBN: 955-9054-35-X (2001).

Editorial Board

Editor-in-Chief: Prof. M.M. Karunanayake, Department of Geography, USJ

Members

Prof. Sune Berger, Faculty of Social Science, University of Karlstad

Prof. Y.A.D.S. Wanasinghe, Department of Geography, USJ

Dr. Clas Lindberg, Department of Social and Economic Geography, Uppsala University

Prof. MDC. Abhayaratna, Department of Geography, University of Sri Jayewardenepura

Chapters:

1. Karunanayake, MM., Introduction
2. Karunatileke, TH., Implementing Poverty Alleviation Strategies in Rural Sri Lanka: Experience at the Grassroots with Special Reference to the North Central Province
3. Weerasekara, TB., Poverty Alleviation through Micro Enterprise Development: A Case Study of the Central Province of Sri Lanka.

-
4. Gooneratne, Wilbert., Rethinking Sri Lanka's Regional Development: Concepts, Policies and Institutions

Book 2: Title - People, Space and Resources – Perspectives on Development Issues in Rural Sri Lanka,

ISBN: 955-97317-0-X (2002).

Editor: Prof. Karunanayake, MM.

Chapters:

1. Karunanayake, MM., Introduction.
2. Wanasinghe, YADS., Regional Imbalances in Sri Lanka: A Critique of Regional Development Policies and Strategies.
3. Abhayaratna, MDC., Agricultural Innovation and Marginalization of the Rural Poor in Sri Lanka.
4. Karunanayake, MM., Political Ecology of Protected Area Management and its Impact on the Rural Poor in Sri Lanka.

Book 3: Title – Rural-Urban Interface in Sri Lanka: Studies in Regional Development

ISBN: 955-97317-3-4 (2005).

Editor: Prof. MM Karunanayake

Chapters:

1. Karunanayake, M.M., Introduction
2. Rupasena, L.P., Preliminary Analysis of Rural Periodic Markets (*Polas*) in the Central and the North Central Province of Sri Lanka.
3. Karunanayake, M.M., Wanasinghe, Y.A.D.S. & Ratnayake, R.M.K., Dynamics of Rural Periodic Market Circuit in the Anuradhapura District of North Central Sri Lanka.
4. Siriwardena, L., Institutional financing of Regional Imbalances in Sri Lanka: The Role of Domestic Banks.

5. Wanasinghe, YADS., The Role of Small Towns in the Development of the North Central Province in Sri Lanka.
6. Wanasinghe YADS. & Karunanayake, MM., Urban Development and Regional Planning in Sri Lanka

Book 4: Title – Regional Development in Sri Lanka: Resetting The Agenda,

ISBN: 955-97317-4-2 (2005).

Editors: Prof. M.M. Karunanayake and Anders Närman

Chapters:

1. Karunanayake, MM. and Anders Närman, Introduction.
2. Dangalle, Nimal, Spatial Disparities in Development in Sri Lanka.
3. Abhayaratna, MDC., Regional Development Implications of the Accelerated Mahaweli Project.
4. Wanasinghe, YADS., Planned Townships in the Downstream Areas of the Mahaweli Project in Sri Lanka: An Analysis of their Contribution to Regional Development.
5. Närman, Anders, Bridge over Troubled Water: A Study of Pangani District (Tanzania) and Hambantota District (Sri Lanka)
6. Pilesjö, P. and Stroh, E., Implementation of GIS in Social Sciences.
7. Gunatunga, RS. and Karunanayake, MM. Information and Communication Technologies for Enhancing Socio-Economic Development at the Local Level in Sri Lanka: Issues, Challenges and Strategies.
8. Gooneratne, Wilbert, A System of Development Regions for Sri Lanka: Meeting the National and Global Challenge.
9. Lindberg, Clas, In Memory of Anders Närman (1947-2004).

4.5. PUBLICATIONS

Papers/reports which are Published or Accepted for Publication:

- Deheragoda, C.K.M. (2008), "Social Impacts of Landside Disasters with Special Reference to Sri Lanka" Vidyodaya Journal of Humanities & Social Sciences: Prof. M.M. Karunanayake Volume, Volume 2 (2008), University of Sri Jayewardenepura, Sri Lanka pp133-160.
- Deheragoda, C.K.M. (2008), "Addressing the shelter issue of urban poor: a case study from Sri Lanka", published in the proceedings of Meeting Global Challenges in Research Cooperation, Sida/SAREC International Conference organized by Centre for Sustainable Development in Uppsala of Uppsala University and the Swedish University of Agricultural Sciences – Uppsala–Sweden from 27-29 May 2008, in web: <http://www.csduppsala.uu.se/sidaconference08>; date download 17th June 2008.
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Abhayaratna, MDC. (2002), "Regional Imbalances Implications of the Mahaweli Project," Paper presented at the Conference on Regional Imbalances Experience across Countries held at the Faculty of Social Science, Chiang Mai University, Thailand, 27-29 November, 2002.

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Deheragoda, CKM. (2009), "Potential of GIS For Promotion of Renewable Energy Power Generation in Sri Lanka with Special Reference to Mini Hydro Projects", Abstract Published in Map Asia 2009 to be held in Singapore from 18th to 20th August 2009.

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Deheragoda, CKM. (2005), "New Waves of Redevelopment of Matera", at ASIA URBS Workshop 1 - Identifying & Defining Strategic Urban Projects, Jointly Organized by the University of Leuven - Germany and the Faculty of Architecture at the University of Moratuwa from 11-13 July 2005 in Matera, Sri Lanka.

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Paper presented at the USJ-Sida/SAREC Research Cooperation Project and Ministry of Environment and Natural resource Joint International Conference on Relating the Environment to Regional Imbalances held in Colombo (16-18 September, 2002).

Wanasinghe, YADS. (2002), "A Critical Assessment of the Role of Planned Townships in the Mahaweli Development Project Area", Paper presented at the Conference on Regional Imbalances Experience across Countries held at the Faculty of Social Science, Chiang Mai University, Thailand, 27-29 November, 2002. Prof. Y.A.D.S. Wanasinghe also chaired a session.

Wanasinghe, YADS. (2002), "Public-Private Sector Partnerships for Regional Imbalances. An Analysis of the Role of the State and the Entrepreneurs in the Private Sector in the Implementation of the 200 Garment Factory Programme in Sri Lanka," Paper presented at the Eighth International Conference on Public-Private Sector Partnership Exploring Cooperation, held at the Karlstad University, Sweden, 12-15 June, 2002.

Wijesinghe, S. (2004), "Understanding Poverty through Social Stratification: Case Study from Akkarawatta Village in the Central Province of Sri Lanka". Published in 18th European Conference in Modern South Asian Studies, Lund Sweden 2004, held from 6th to 9th July 2004 in Sweden.

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Wijesinghe, S. (2003), "The Impact of Micro Enterprises on Household Economy," Paper presented at the Third International Convention for Asian Scholars (ICAS), held from 19th – 22nd August 2003 in Singapore.

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4.6. SEMINARS

1. Deheragoda, CKM. & Karunanayake, MM. (2006), "Post-Tsunami Recovery in Sri Lanka: Challenges and Implications for Development", Seminar Jointly Organized by Department of Social & Economic Geography, Collegium for Development Studies - University of Uppsala and Sida SAREC Research Cooperation Project USJ/Uppsala University, (From 6th to 11th September 2006).
2. Deheragoda, CKM. & Karunanayake, MM. (2004), "Post-Conflict Reconstruction and Human Security Issues in Sri Lanka" Guest Speaker at UNCRD Research Seminar on Human Security in Sri Lanka, held in UNCRD, Nagoya, Japan, from 28th September 2004.
3. Karunanayake, MM. & Deheragoda, CKM., (2004), "Alleviating Poverty: Reflections on the Sri Lanka Experience", Guest Speakers at UNCRD Research Seminar on Human Security in Sri Lanka, held in UNCRD, Nagoya, Japan, from 1 October 2004.

4.7. KEYNOTE AND SPECIAL ADDRESSES

1. Deheragoda, CKM. (2010), "Networking for Sustainable Development", Discussant at the Technical Sessions of the 23rd Annual Sessions - Vision 2020: The Way Forward, of the Organization of Professional Associations of Sri Lanka (OPASL), held on 1st & 2nd October, 2010 at Hotel Taj Samudra, Colombo.
2. Deheragoda, CKM. (2010), "Energy Management Systems in Buildings", Keynote Address at the Seminar Organized by the Institute

for Construction Training and Development on 31st March, 2010, at ICTAD Auditorium, Colombo.

3. Deheragoda, CKM. (2010), "Tools For Sustainable Urban Development", Keynote Address Delivered at the Annual Sessions 2010 of the Institute of Town Planners Sri Lanka, on 27th March 2010 at 36th Floor, East Tower – World Trade Centre – Colombo.
4. Deheragoda, CKM. (2009), "Energy Policies and Stakeholder Involvement in Policy Formulation", Keynote Address at the National Training Workshop on Mainstreaming Gender Concerns in Energy Projects in Sri Lanka, Organized by National Network on Gender and Energy (NANEGE), hosted by the Agriculture Education Unit of the University of Peradeniya and Sponsored by ENERGIA – International Network on Gender and Sustainable Energy of the Netherlands, held from 3rd to 6th December, at Devon Hotel, Kandy.
5. Deheragoda, CKM. (2009), "Reawakening of the North and East – Power and Energy Needs", Guest Lecture Delivered at the Seminar on Reawakening of the North and East, Organized by the Chamber of Construction Industry Sri Lanka, on 27th September 2009 at Hotel Galadari Colombo.
6. Deheragoda, CKM. (2009), "Role of Sri Lanka Sustainable Energy Authority in Promoting Renewable Energy in Sri Lanka", Guest of Honour, at the Seminar and Panel Discussion on 'Sustainable Energy: Potential and Policy Gaps', Organized by the Science and Technology Advisory Committee and MRS of the Sri Lanka Association for the Advancement of Science, held at the SLAAS on 16th June, 2009.
7. Deheragoda, CKM. (2009), "Energy Efficient Lighting", Chairman's Opening Address at the Regional Conference on Energy Efficient Lighting, Jointly Organized by United State Agency for International Development, Sri Lanka Sustainable Energy Authority and Lighting Research Centre at Rensselaer University - New York - USA at the Taj Samudra Hotel Colombo from April 28 to 30 2009.

8. Deheragoda, CKM. (2007), "Living High: Social Dimension", Keynote Address delivered at Seminar on "Living High: Sri Lankan Context", Jointly Organized by Institute of Town Planners Sri Lanka & Condominium Management Authority, BMICH, Colombo, 16th February 2007.
9. Deheragoda, CKM. (2005), "Disasters and Future Challenges", Guest Speaker Annual Sessions 2005, Institute of Town Planners Sri Lanka, Held at Reef Hotel, Hikkaduwa, 5th March 2005.
10. Deheragoda, CKM. (2005), "Regional Development in Sri Lanka", Keynote Address at the Conference on Launching of the Publication on Regional Development in Sri Lanka- Resetting the Agenda, Organized by Sida/SAREC Research Cooperation Project on Regional Development and Poverty Alleviation at the Department of Geography – USJ, held at Hotel Taj Samudra, Colombo, on 1st October 2005.
11. Deheragoda, CKM. (2005), Disaster Management Response in the Tsunami Aftermath in Sri Lanka and Lessons Learnt" Guest Speaker, at International Conference on Disaster Management and Planning Response, Organized by the Institute of Town Planners Sri Lanka Held at Hotel Taj Samudra, Colombo – Sri Lanka, from 5 & 6th December 2005.
12. Deheragoda, CKM. (2005), "Regional Imbalances in Sri Lanka", Keynote Address at the Conference on Launching of the Publication on Regional Imbalances in Sri Lanka- Resetting the Agenda, Organized by Sida/SAREC Research Cooperation Project on Regional Imbalances and Poverty Alleviation at the Department of Geography – USJ, held at Hotel Taj Samudra, Colombo, on 1st October 2005.
13. Deheragoda, CKM. (2004), "Human and Physical Impact of Landslides; a study of the Kotapola District Secretariat Division in Sri Lanka" special address at the Seminar on Landslides, Department of Human and Economic Geography, Upsala University on 26th march 2004.

14. Karunanayake, MM. & Deheragoda, CKM., "Research Issues in Post War Sri Lanka" Special Address delivered at the Department of Human and Economic Geography, Upsala University on 27th march 2004 at the Upsala University.
15. Karunanayake, MM. (2002), "Growth and Stability through Partnership: A South Asian Perspective", Keynote Address delivered at the Eighth International Conference on Public-Private Sector Partnership: Exploring Cooperation, held at the Karlstad University, Sweden, 12-15 June 2002.
16. Karunanayake, MM. (2002), "South – South Research Partnership: Exploring the Potential" keynote address delivered at the Conference on Regional Imbalances Experience Across Countries held at the faculty of Social Sciences, Chiang Mai University, Thailand, 27-29 November, 2002.
17. Sangasumana, P. Rev. (2008), 'Displacement as a state of Inbetweenness' Special Address delivered at the department of Cultural Geography, Stockholm University, Sweden, 23rd September 2008.

4.8. FINAL PHASE RESEARCH PROJECTS:

1. Impact of Poverty on School Dropouts in North Central Province of Sri Lanka by Dr. (Mrs). Thennakoon, Completed.
2. "Impact of Gamidiriya Project on Improvement of the Livelihoods of the rural communities in Badulla District", by Dr. (Mrs). Thennakoon, Completed.
3. Poverty and the education environment of school children in the Central Province of Sri Lanka", by G.P. Karunanayake, Completed.
4. Expansion of the Rubber in High Altitude Areas of Central Province and its Impact on the Livelihood of the Poor by Dr. S. Thennakoon (Mrs.) & Dr. V.H.L. Rodrigo, Completed.

5. Relationship between Land use and Poverty: A Study on Kala Oya Catchments Area in North Central Province of Sri Lanka by Dr. Krishan Deheragoda and Mr. B.A.S.C. Kumara, Completed.
6. Landslide Disaster Vulnerability of Mahaweli Reservoir Areas of the Central Province by Ms. H.M.J.R. Herath & Dr. CKM Deheragoda, Completed.
7. Conflict Mitigation Strategies of IDPs in North Central Province of Sri Lanka: A study of Frontier Villages in Kebithigollewa Divisional Secretariat Division in the Anuradhapura District by Rev. Pinnawala Sangasumana, Completed.
8. Post Conflict rehabilitation challenges in the Eastern Province of Sri Lanka", by Dr. Krishan Deheragoda, Completed
9. "Long term effect of involuntary resettlement: A study of Doragala GN Division of Kandy District", by Dr. R.M.K. Ratnayake, Under Completion.
10. Eco Tourism Potential of Ampara District of Sri Lanka by Dr. CKM. Deheragoda, Under Completion.

4.9 SPECIAL ACHIEVEMENTS & AWARDS

1. A team of independent evaluators from the Quality Assurance Accreditation Council, appointed by the University Grants Commission have studied our department and its Self Evaluation Report for the Assessment of Quality Assurance during the year under review and rated the Department of Geography of the University of Sri Jayewardenepura as one of the most confident academic departments among the Sri Lanka Universities in 2006.

This achievement is mainly due to the successful capacity building programme implemented by the Sida-SAREC Research Cooperation

Project. Accordingly the academic capacity as well as the infrastructure development at the department was taken place creating a favourable environment for teaching, training and research and development of both undergraduates and post graduate students thanks to the continues support received from the sida-SAREC Research Corporation Project. This corporation has been enabled not only to build the confidence of the department but also to make it one of the most outstanding institutions center of Academic and Research Excellence in Sri Lanka.

2. Two Staff members of the Department of Geography have become Vice Chancellors of the USJ during the project period.

Prof. D.S. Eritawatthe (Former VC-USJ) &

Dr. NLA Karunaratne (Incumbent VC-USJ).

3. Three of the project beneficiaries have held the position of Headship at the USJ- Department of Geography:

Mr. UHN Wiswakula (Uppsala trained expert in Qualitative Research Methods), Functioning as the Head of the Department since 2009 to date.

Dr. G.M. Bandaranayake (Ph.D. holder from the Project) held the position of Head of the Department (2007-2009) succeeded from **Dr. C.K.M. Deheragoda** (Project Leader), who head the Headship of the Department from 2003-2007.

4. Two of the project beneficiaries have held the position of Headship at the USJ- Department of Economics:

Dr. (Mrs.) D.P. Withanage (Ph.D. holder from the Project) is the incumbent Head of the Department, Succeeded from **Dr. DPS.**

Chandrakumara, DPS (Ph.D. holder from the Project) who held the Headship of the Department from 2007-2010.

5. **Prof. CKM. Deheragoda (Project Leader)** was entrusted with the following esteemed responsibilities:
- a. Chairman, Board of Social Sciences at the Faculty of Graduate Studies, University of Sri Jayewardenepura, Since September 2008 to date.
 - b. Chairman, Sri Lanka Sustainable Energy Authority, (2008 -2010).
 - c. Senior Advisor to Hon. Minister of Ports & Aviation (2006 – 2007).
 - d. Chairman, Ceylon Shipping Corporation (2006 to 2007).
 - e. Vice Chairman, Sri Lanka Ports Authority (2004 -2006).
 - f. Advisor to the Hon. Minister of Transport (2004 -2006).
 - g. Chairman, Urban Development Authority of Sri Lanka – UDA (2000 – 2002).
 - h. Course Coordinator, M.Sc. Course on Human Security, Department of Geography, conducted under the aegis of Sida-SAREC Research Cooperation Project of USJ-University (2004 - 2007).
 - i. Member of the Board of Governors of the National Aquatic Resource Development Agency - NARA with effect from 28 June 2004 to 2006.
 - j. Member of the Governing Council of the National Institute of Fisheries & Nautical Engineering – NIFNE (2004 -2006).
 - k. Advisor to the Hon. Minister of Housing and Urban Development (2002 – 2004).
 - l. Member, Inter Agency Working Groups to Assist in Revision of Coastal Zone Management Plan of Sri Lanka with effect from 8th January 2002 to 2003.
 - m. Member, Central Planning Commission of Sri Lanka with effect from 24th December 1998 to 2004.

6. **Prof. Krishan Deheragoda** (Project Leader), was actively assisted the Parliamentary select committee on preparation of National Disaster Management Policy of Sri Lanka (2005). He is also serving the Government of Sri Lanka in the capacity of Senior Advisor to several Ministries.
7. **Mrs. H.M.J.R. Herath** (M.Phil. holder from the Project) has also won a partial sponsorship to attend the 37th International Binghamton Geomorphology Symposium, University of South Carolina, Columbia S.C. USA on merit of her paper on "Contribution of Land Use Dynamics in Causation of Mass Movements in Surroundings of Kothmale Reservoir of Sri Lanka" in October 2006.
8. **Mrs. H.M.J.R. Herath** (M.Phil. holder from the Project) has won an award for presenting the best academic paper in a panel of Geography on "Analysis of Landuse Dynamics in Surroundings of Kothmale Reservoir Utilizing MS Works" at the Sabaragamuwa University 10th Anniversary International Symposium on the Issues & Challenges of the 21st Century, held in July 2006.
9. **Prof. M.M. Karunanayake** (Founder Project Leader) has contributed to the UNDP, for developing a policy framework for recovery of small and medium scale entrepreneur sector affected by the Tsunami (2005-2006).
10. **Prof. J. Katupotha** (Project Beneficiary) was Accorded with NARESA Merit Award for best Scientific Research Project for 2007 for the Research on "Evolution and the Geological Significance of Late Pleistocene Fossil Shell Beds on the Southern Coastal Zone of Sri Lanka".

11. **Dr. RMK. Ratnayake** (Ph.D. holder from the Project) was entrusted with the following esteemed responsibilities:
 - a. Treasure Alumni Association of USJ- Sri Lanka (2008 to Date),
 - b. The University Proctor (2008 – 2009), &
 - c. Faculty member of the Computer Advisory Committee (1998 – 2002).
12. **Rev. Pinnwala Sangasumana** (M.A. and Potential Ph.D. Candidate of the Project) has won full sponsorships to attend the International Workshop on Faith Based Humanitarianism at the Refugee Studies Centre, University of Oxford from 22-23 September 2010 and 6th and 7th International Buddhist Conferences held in Thailand in 2009 and 2010.
13. **Dr. (Mrs.) S. Thennakoon** (Project Researcher), National Science Foundation Research Grant to participate in the 20th European Conference on Modern South Asian Studies at University of Manchester, U.K, 2008.
14. **Dr. (Mrs.) S. Thennakoon** (Project Researcher), Presidential Award for Scientific Research 2002 for the Research Paper on "Priorities and Objectives of Smallholder Rubber Growers and the Contribution of Intercropping to livelihood Strategies: A Case Study from Sri Lanka" published in Outlook on Agriculture, Vol. 30 No. 4.
15. **Prof. YADS Wanasinghe** (Project Researcher & Facilitator) was accredited by the International Panel of Climate Change for Contributing to the Award of the NOBEL PRIZE for 2007 to the IPCC.

4.10 PROJECT SUMMARY: INFRASTRUCTURE DEVELOPMENT OUTPUTS

Sida/SAREC Research Cooperation Project of the Department of Geography in the University of Sri Jayewardenepura was a project with multi faceted dimensions - *Spatial Dimension* focusing on the Central and the North Central Provinces, *Capacity Building Dimension* to empower the academics and the graduate students and an *Infrastructure Development Dimension* to create a favourable environment for Teaching, Training and Research. Accordingly, under the infrastructure development component of this project a favourable teaching, training and research environment has been created within the USJ/Department of Geography through the development of its infrastructural base including a functioning of state of the art GIS research laboratory and a teaching facility. Over 70% of the funding may have gone into this purpose.

This project has contributed to make the Department of Geography – USJ a center of excellence in teaching, training and research with the installation of a State of the Art GIS Research Station and a Teaching Laboratory with over 75 computers - fully loaded with latest ArcGIS capabilities; and the provision of a well equipped Soil Laboratory; fully computerized Weather Station; Seminar Room, Refurbished Lecture Theaters with modern IT and multimedia facilities, Field work equipments, Research Library and scientific equipment including GPS, Satellite images; and a mobile Research Facility in the form of a 52 seat brand new bus, to name a few. All these have helped the Department of Geography – USJ to become one of the most resourceful academic institutions within the university system of Sri Lanka. The total inventory of items procured under this project exceeds well over 1,000 items including Computers, GPS, Multi Media, Audio and Visual Aids, Software, Books, Maps, Satellite Images, Laboratory Equipments, Scientific Equipments, Teaching, Research and Field Work Aids, Mobile Research Station in a 52 Seater Bus, etc.

4.11. SPECIAL ACKNOWLEDGEMENT

We are most grateful to Sida/SAREC for its generous funding of the project. Our associates from Sida/Stockholm deserve special thanks from us. It goes to Messrs Thomas Kjelqvist, Afzal Sher, Dr. Per-Einar Troften, Dr. Anders Clarehall, Mr. Goran Schill and Ms. Ros Marie Balow for their enthusiastic and sincere, support and guidance, enabling the project to move ahead sans any red taps.

Our Colleagues: Dr. Clas Lindberg (*the Project Leader*), Professor Lennart Strömquist, Professor Jan Öhman (*Head of the Department*), Emeritus Professor Gunnar Olsson, Professor Ali B. Najib, Dr. Susanne Stenbacka, Dr. Aida Aragao-Lagergren, and Ms. Kerstin Edlund from the Uppsala University Department of Social and Economic Geography; Professors Paul Sinclair and Anders Kalif from the Uppsala University Department of Archeology; Late Professor Anders Narman from the Gothenburg University, Professor Sune Berger from the Karlstad University and all others who have been assisting us in numerous ways, deserve our sincere thanks for having supported us all the way and given of their best to make the project a success.

The Sida/SAREC Research Cooperation Project has been able to close on a high note owing to the unstinted cooperation received from the several Vice Chancellors of the University of Sri Jayewardenepura who held office during the project period, in particular Professor P. Wilson who was Vice Chancellor at the time of project commencement. Professors Dhammika Tantrigoda and Kumudu Wijewardena both of whom held office as Dean Graduate Studies too were supportive of project activities. Present Vice Chancellor Dr. NLA Karunaratne and present Dean Graduate Studies Professor Swarna Piyasiri have overseen and supported the project activities linked to the winding up phase with unwavering commitment.

It is also my duty to acknowledge the support given by the present Registrar Mr. Jayalath Mutthettuwegedara and his predecessor Mr. Mahinda Abeywardena, the Bursar, Acting Bursar, successive Deputy Registrars and Senior Assistant Bursars of the Faculty of Graduate Studies, particularly the present SAB of the Faculty of Graduate Studies Mrs. Lekha Wickramasinghe, and members of the non-academic staff of that Faculty.

Special thanks goes to: the incumbent Head of the Department of Geography - Mr. UHN Wishwakula and all his predecessors who held office during the project period; former project Leader Emeritus Prof. MM. Karunanayake; former Programme and Course Coordinators Emeritus Professor YADS Wanasinghe, and Professor MDC Abhayaratna; former Assistant to the Project Leader Dr. Sunethra Thennakoon; Coordinator to the GIS Teaching Laboratory Dr. RMK Ratnayake; former Project Officer at the GIS Laboratory Mr. Prabath Malavige; former and current Project Administrative Officers Mr. Gamini Alwis and Miss. Heyshani Fonseka respectively; Technical Officer of the Department of Geography Mr. MND Ariyaratne and all the other members of both academic and non academic staff of the Department of Geography for assisting in giving the Project meaning and substance. Their assistance for the well being of the project is gratefully acknowledged.

SECTION FIVE

ABSTRACTS OF THE M.A., M.Phil & Ph.D. THESIS PRODUCED UNDER THE SPILT PROGRAMME BETWEEN UNIVERSITY OF SRI JAYEWARDENEPURA – SRI LANKA & UPPSALA UNIVERSITY – SWEDEN

5.1. Ph.D. PROGRAMME (*USJ/ Uppsala University Sandwich Model*)



(1) Dr. RMK Ratnayake (2004)

Thesis Theme:

**"Rural Urban Interaction for Regional Imbalances
in Sri Lanka: Experience of the North Central
Province".**

ABSTRACT

Recent research underlines the potential advantages of urban centres in stimulating regional development (Dewar et al, 1986, UNCRD, 1996, Wanasinghe, 2003). Small towns or rural service centres can help to transform the economy in rural areas by providing access agricultural inputs (seeds, fertilizer), as well as support services (agricultural extension, credit facilities) and maintenance of agricultural machinery, can usually be provided directly to farmers. Small urban centres (small towns) or rural service centres that are at the lower levels of the central place hierarchy are also the first collecting points in the agricultural marketing chain. In addition, small urban centres are considered as suitable locations for concentrating lower order public sector services such as administration, primary and secondary education, health care and institutional credit facilities. In turn, rural households provide resources such as food, labour and markets for urban goods and services. Thus, small towns can serve as

"effective instruments" for improving beneficial rural – urban linkages (Baker, 1996). Linkages between rural and urban areas can therefore generate incomes and improve the quality of life of people in both rural and urban areas (Douglass, 1998 and Unwin, 1989).

The North Central Province (NCP) was selected as the most suitable sub national region in the periphery for the in-depth study of rural and urban linkages, since this is a major agricultural region with different types of rural and urban settlements. Rural settlements are mainly *purana* (or old traditional) tank villages new villages in colonization schemes and the Mahaweli Project area. Urban settlements belong to different levels in the hierarchy of centre places. They include capital cities of former sinhala kingdoms as well as the more recently planned and unplanned small towns.

Most of the factors were associated with land tenure, labour use and marketing play an important role in regional development. However, linkages between urban and rural areas related to land tenure, labour and marketing have not been researched adequately. In order to strengthen the existing beneficial linkages and to reduce or eliminate harmful ones, it is important to examine the nature of linkages between villages and urban centres both within and outside the region. Further the identification of the causes and the analysis of the consequences of harmful linkages would be of immense value when formulating regional development strategies.

The objective of this study is to analyze and interpret the nature of rural – urban linkages associated with land tenure, labour utilization and marketing in rural areas and assess their significance in the development of the NCP.



(2) Dr. (Ms.) Dhammika Vithanage (2008)

Thesis Theme:

"Imbalances in the Location of Industries and Its Impact on Regional Development of Sri Lanka"

ABSTRACT

Regional development has been the subject of considerable debate during the past few decades. Although it was anticipated that there would be favorable results in other areas consequent to the growth and expansion of industries in the economical more advanced region, empirical evidence from many developing countries has revealed that the backward regions did not appear to benefit significantly from expansion in the more advanced region. Therefore most countries expect a balanced industrial growth to uplift the living standards of regional population.

Almost every government in Sri Lanka believed that more employment opportunities could be generated through the development of the manufacturing industries, and introduced various strategies to achieve this through the development of industries. However these policies aimed at high growth in more advanced region rather than distributional aspects. Some governments that came into power recently have observed the concentration of industries in one region and its consequences and focused their attention on the dispersal policy of industries.

However, although the garment factory program provided some solution to the problem of regional unemployment the infrastructure facilities provided to the industries under the industrial estates programm failed to attract industrialists to

backward regions. Therefore the purpose of this study is to identify the constraints that hinder the realization of regional development through industries. In order to examine these constraints too sample from the Western Province, which is developed region and the North Central Province, which is the backward region were selected. Field information has been obtained basically through a questionnaire survey. The study is mainly based on the quantitative technique of data analysis. The results show that not only the industrialists in the backward region, but also those in the more developed region too face common problems with regard to industries. The identified constraints are more acute in the backward region.

The findings of the study have revealed that industries cannot be developed solely through the provision of infrastructure facilities. In addition to that lack of a developed market (foreign and local), scarcity of skilled labour, higher cost of production and the competition from imports too remain the main obstacles to the growth of industries. Therefore these constraints have to be addressed at national level in the attempt to achieve regional development. However this study too reveals that the availability of resources, climatic changes, attitudinal changes and standards of living within different cannot be underestimated.



(3) Dr. Shantha Wijesinghe (2008)

Thesis Theme:

**“Micro-Enterprises in Sri Lanka: An Analysis of their
Potential for Poverty Alleviation”**

ABSTRACT

Poverty is a widely discussed phenomenon in every developing country today. It is a complex and multifaceted phenomenon with many forms and causes. Income-based poverty is the traditional view of understanding poverty but there are many more aspects of deprivation other than income poverty including vulnerability, powerlessness, isolation and humiliation. In a poverty alleviation strategy it is essential to place considerable values on qualitative aspects such as independence, security, self-respect, identity, close and non-exploitative relationships and legal and political rights.

During recent decades the developing countries particularly in Asia and the Pacific have launched different kinds of programmes aiming at the prime objective of reduction and alleviation of poverty. Thus, Sri Lanka has also followed various strategies relating to social welfare and income generation but the problem of poverty is still a widespread phenomenon in the country.

However, the development of micro enterprise sector has also been used as an instrument to alleviate poverty in Sri Lanka, as it gains significance in different aspects. On one way, micro enterprises have the potential to generate more income and employment opportunities for those with few options particularly in the rural sector. On the other way these enterprises may contribute to develop various qualitative values such as security, self-respect, independence etc. related with poverty.

Thus, the objective of this thesis is to examine the extent to which micro enterprise sector can contribute to alleviate poverty in Sri Lanka. Priority has been given here to examine its potential to address various qualitative aspects related with poverty. Their potential to generate more income and employment opportunities, to utilize family labour and to reduce vulnerability were examined and evaluated in this connection. In addition, their significance regarding human economic aspects, family unit of production and sustainable livelihood strategy was also evaluated.

For this evaluation, methodologically qualitative research techniques such as observation, in-depth interviews and discussions, case studies and case histories were mainly applied by selecting two villages in the Central Province of Sri Lanka. Some quantitative techniques such as Difference of Mean Test, Coefficient of Variation were also used in understanding the variation of household income, vulnerability and its related aspects.

Findings of this research disclose that micro enterprise sector gains significance in different aspects particularly within the household economy. It is evident that this sector plays a vital role within the household economy particularly in terms of income generation, family labour utilization, human economic values, reducing vulnerability, family work strategy and sustainability. Thus, it can be concluded that the micro enterprise sector has a great potential for poverty alleviation, as it has the capability to address particularly various qualitative aspects related with poverty.



(4) Dr. DPS Chandrakumara (2009)

Thesis Theme:

"Role of Family in Human Capital Formation:

Implications for Poverty Reduction in Sri Lanka"

ABSTRACT

This study examined the role of family in human capital formation through education. The study adopted both quantitative and qualitative methods complementarily in reaching the aim. The data for the quantitative analysis came from a questionnaire survey while the data for the qualitative analysis was obtained through discussions with children, their family members and village elites in three different areas of the Anuradhapura District of the North Central Province of Sri Lanka. Descriptive statistics helped identify the binary logistic regression model with a probability of a child reaching Advanced Level as the dependent variable and six explanatory variables as appropriate for the estimation purpose.

It was found that the two variables, 'Number of Senior Siblings' and 'Assets Index' are positively correlated with the probability of a child reaching Advanced Level while the two variables, 'Father's Age' and 'Number of Junior Siblings' show a negative relationship. The qualitative analysis revealed how the role of family is important in the formation of human capital among children. It revealed that family assets being a proxy for long-term family income reduces time for work and increases the time for education of children. However, despite the assets level, rural children especially girls are at a disadvantage in education. Among the occupation categories, teaching and executive occupations are the best in the formation of human capital while the worst is farming and low-level physical labour occupations. Senior siblings endow both pecuniary and non-pecuniary benefits for junior siblings while junior siblings generate negative effects on elder

siblings' education. Father's age is inversely related with the education of children because older fathers are not rich enough with modern attitudes, education and social contacts which are important for education compared to young fathers. The other members living with the nuclear family positively affect the education of children as they fulfil much of the duties which otherwise should be completed by children although the number of families that have such members are negligible. The study further reveals that though gender of child is not a factor for the education decisions of parents, girls face disadvantages in education due to femininity.

The study presents its special implications for poverty alleviation. When the children are not matured enough to take education decisions by themselves, the role of family is more important. Since this role is significantly determined by the economic position of families, there should be an alternative mechanism for poor families to mobilize human capital among them. Steps should also be taken to minimize the rural and urban disparity in human capital formation. Positive externalities generated by senior siblings on junior siblings should be expanded by economically empowering the elder children in poor families. Government education policy should be linked with the housing and employment policies. As parents' presence at home is important for the children's education, the government should take action not to employ or transfer parents far away from family. Higher drop outs of elder children and the time of children devoted to work should be paid more attention by the government. Alternative strategies should be adopted when the family variables are not possible to be activated in the short-run. Since private tuition improves the accessibility to effective human resources for all children, steps should be taken to extend the service of the private sector more systematically.

Among the links identified for further research, the impact of age gaps among siblings, gender structure, role of non-family factors and informal education in the formation of human capital are important. In addition, children's specialization in

different fields of study, possibility to regulate the private sector for a better process of human capital formation, and children's time allocation among education, work, and leisure are to be further studied.



(5) Dr. GM Bandaranayake (2009)

Thesis Theme:

"A Geographical Analysis of Positioning and Functionality of the Tank Cascade Systems of the North Central Province Sri Lanka"

ABSTRACT

The tank cascade system in the Dry Zone of Sri Lanka is one of advanced water conveyance and utilization mechanisms among the medieval hydraulic civilizations in the world. It was the back born of the hydraulic civilization, flourished for more than 12 centuries in the Dry Zone of Sri Lanka. The cascade tank systems were not only an irrigation water management system but also a sustainable water resource utilization mechanism developed as an adjustment to the seasonal water scarcity, utilizing the landscape and the climate of the Dry Zone environment.

Most studies on tank cascade systems in Sri Lanka have dealt with irrigation aspects. Even the limited studies on environmental and hydrological aspects, are based on individual tanks or isolated locations of small cascades.

Morphological characteristics such as shape and size of cascades and their relation to the water availability from a spatial perspective have not been adequately studied. Thus, the present study attempted to analyze the water availability of tank systems from holistic sense, using remote sensing and topographical map

interpretation together with field investigations. The water efficiency of tank cascades was analyzed within the context of spatial and temporal variations in order to identify the most efficient cascade types of Sri Lanka.

To achieve this objective, the study analyzed the distribution and position of tank cascade systems with emphasize on the physical setup. Accordingly, the study was able to classify the cascades into different types based on size, shape and destination point of water flow.

With the help of the Land Sat interpretation, the study attempted to view the environmental status, in particular the dryness and the moisture availability of the tank catchments. These parameters were used to determine which types of cascades is more efficient in maintaining a wet environmental condition. Quantitatively, the cascade water yield was calculated using rainfall input and water discharge output in order to make the water balance of the cascades. This water balance was used to determine the most effective cascades in the sense of deficit or surplus of water.

In terms of system theory, this study attempted to identify the fact that what types of cascades are really functioning as systems. This was useful to build a model of the hydraulic structure of cascades that functions with inter- tank water flowing system. In addition, the people's perceptions and awareness of cascading water flow was used to further confirm the system functionality.

In sum, with use of visual information together with quantitative data, this study provides basic guidelines to identify the most important cascade types, on which the attention should be focused in planning of small tanks and water resources development in the Dry Zone of Sri Lanka.



(6) Rev. Pinnawala Sangasumana (2010)

Thesis Theme:

“Mapping Inbetweenness: The Case of Conflict Induced Internally Displaced in Sri Lanka”.

ABSTRACT

The conflict-induced internal displacement (CIID) wherever it occurs creates a humanitarian, political, socio-cultural and environmental tragedy of great proportions. Attempts to redress this problem had been numerous but none had so far been able to offer a satisfactory solution which necessitates the work done in this thesis. At the time of the defeat of the LTTE in May 2009, Sri Lanka faced a phenomenal problem of having to care for hundreds of thousands of conflict-induced internally displaced persons (CIDPs). In this context there is a dire need to fill the void between policy and needs on the field in restoring these displaced lives. Hence, it is argued that, the state of inbetweenness experienced by the displaced should be focused as the focal point in seeking durable solutions to the problem of CIID.

Mapping inbetweenness is not only a cartographic exercise. It attempts to use the powers of human imagination to conceptualize the internal displacement as an indicator of inbetweenness that pushes the CIDPs into a state of indecision and ambivalent behaviour as a result of experiencing uncertainty, dispossession, insecurity and change. The focus of this mapping exercise is to define, characterise and interpret the state of inbetweenness experienced by the CIDPs at every stage of the displacement-resettlement continuum. This knowledge is critical to design innovative solutions to the issues and challenges faced by the CIDPs. The research achieves this by grounded research methods which were useful to gather and analyse qualitative data obtained from lived experiences of the CIDPs. The

displaced studied here represent different ethnicities, different experiences and numerous geographic locations.

The geographic meaning of 'place' is wide and deep since it includes one's place in society. This research takes the position that by the same token 'displacement' also lends to a rich array of nuances and interpretations. One's place in the society is powerfully determined by his/her life goals and socio-geographical networks. This implies that displacement is a process whereby they loose this power which was built up over the years. Hence, the study argues that restoring normal life of the displaced is in fact not just an issue of returning to their places of origin but a process that addresses their state of inbetweenness and consequent of which they would be able to find their place in society. Geography, migration and regionalism interact in a special way in contexts of conflict and displacement. The experience of the CIDPs in Sri Lanka lends a unique example of this kind of interaction which is why this research spends much space on contemporary Sri Lankan experiences on how geography, migration, and regionalism interact. An interesting repertoire of forced migration patterns including in-flows, out-flows, mass movements and circular migrations could be identified particularly in relation to the displacement of Vanni CIDPs. The study also highlight that the regional geography of displacement is very important during the entire period of the armed conflict.

The study reveals that, uncertainty, dispossession, insecurity and change—the four characteristics of inbetweenness—dominate pre-displacement, flight, encampment, and resettlement—the four stages in the displacement-resettlement continuum—respectively. The main argument here is that if there is a proper framework that could address the above four characteristics it would lead to a durable solution for the problems of the internally displaced. The study introduces two concepts; *mandala* and *fix-points* as well as a model; *mandala of security* that has built-in a set four essential fix-points: home-identity, family-relationship, livelihood-social status, and resource-accessibility. If the displaced are to be placed

sufficiently in the mandala of security, various material and intangible supports should be given to re-establish these fix-points.

5.2. M.Phil/MA PROGRAMME *(USJ/ Uppsala University Sandwich Model)*



(1) Ms. Jayani Rupri Herath (M.Phil. 2006)

Thesis Theme:

"An Analysis of Mass Movements in Kothmale Oya Catchment"

ABSTRACT

Mass Movements occur as gravitational forces exceed the strength of material in a slope and it is influenced by variety of factors interacting in complexity causing catastrophic disasters. There are various types of Mass Movements and they are classified using various classifications schemes. One of the recognized systems of these is the "Wyoming Landslide Classification Scheme".

Sri Lanka is no exception in terms of natural disasters and the central highland areas were more prone to mass Movements. The introduction of major transformations to the environment with the Accelerated Mahaweli Development Program has further contributed to this problem. Many studies have clearly shown that there is a significant increase of slope instabilities and Mass Movements following this significant alteration to the environment and this is especially true regarding the subtle and sensitive environment of the surroundings of the Kothmale Oya Valley and its Catchment Area

In order to identify the contributory and initiating factors of Mass Movements in Kothmale Oya Catchment, this study was carried out in identified 21 sites of Mass

Movements in the surroundings of Kothmale Oya Reservoir. Various characteristics of each site were analyzed using field observations. Simultaneously, overall analysis of land use and vegetation dynamics was also carried out using Aerial and Satellite Remote Sensing where MFWORKS and Multispec software were used for in-depth analysis.

The study revealed that, areas of Mass Movements within the Kothmale Oya Catchment can be classified in to two sets, depending on the major factors of contribution, namely: Reservoir Induced Mass Movements and Rain Induced Mass Movements. These two different sets were having unique individual characteristic features that were clearly evident during the field observations of these sites.

The construction of Kothmale reservoir directly and indirectly made pathways to above mentioned slope instabilities. Other than these major factors many other diverse factors interacted and combined in complexity to influence the occurrence of the Mass Movements. They included: Topographical factors (Presence of steep slopes), Geological factors (Presence of lineaments, anticlines, synclines), and Climatological factors (Rainfall pattern of the region) as the natural contributors to the process. A number of manmade factors also contributed towards the dynamics of Land Use and Vegetation and to aggravate the burden of the causation and initiation of mass movements in the Kothmale Oya Catchment. The impact of the man made activities such as Tea and Vegetable cultivation on steep slopes with inefficient drainage system, deforestation and unauthorized resettlement in the reserve areas of the Kothmale Reservoir were also immensely contributing to the causation of Mass Movements.



(2) Rev. Pinnawala Sangasumana (M.A. 2004)

Thesis Theme:

"Conflict and Internal Displacement in Sri Lanka: A Study of Two Communities in the Anuradhapura District".

ABSTRACT

In the present world, displacement of people has become a severe issue which can be analyzed in various dimensions. The internal and international conflicts have played a major role for producing the many thousands of IDPs in the world. In the Sri Lankan context, the main conflict could be considered as the result of much complicated combination of internal and external factors such as ethnicity, culture, ideology, religion, politics, competition for resources, foreign intervention etc. The civil war which has kept worsening almost during the past two decades is a result of the ethnic conflict originating from a combination of all types of the above mentioned factors. It can be basically analyzed under the historical, political and socioeconomic aspects which caused severe problems to the Sri Lankan society. Internal displacement is a complicated process consisting of sub-processes such as displacement, migration, resettlement, relocation etc. and several stages which are integrated into each other. The nature of displacement in Sri Lanka can be identified from different dimension and it resulted to characteristic features and spatial patterns of welfare centres. The important finding to the present study is that temporal changes in social and spatial displacement of both Sinhalese and Muslims from border villages have been taken place in accordance with changing interface of Sri Lankan civil war.

RESEARCH PAPERS

5.3.

(1) Dr. Sunethra Thennakoon



Title:

"Impact of Gemidiriya Project on Improvement of the Livelihood of Rural Poor Communities: A Case Study in Balagala Village of Badulla District - Sri Lanka".

ABSTRACT

Since Independence in 1948, the main responsibility of developing rural areas in Sri Lanka was held by the Government. Development programmes of donor agencies were handled by the Government. These projects were largely managed by officials subject to interference by influential persons. There was no mechanism in these projects for community ownership in the related activities. This kind of development projects weakened community participation and collective action which prevailed in the village. The government approach to development as a provider, owner as well as manager of development, resulted in a government-dependent mentality on the part of people. Some of the reasons that affect the development of Rural Sri Lanka are; limitation of direct contribution of women to development activities, dependency mentality, lack of proper development methodology, the community lacking decision making power and lack of proper protection system. In the light of the above, there is a strong need for the Village community to organize themselves for meeting their needs, to strengthen their group activities and build their own community organization, identify the development needs, to protect village public property and to contribute at least part of their own resources for their development. Gamidiriya is a new, holistic development approach, because it considered many of the above areas which were excluded from the previous development initiatives. Gemidiriya community development and livelihood improvement project was designed to assist the

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ALLEVIATION**

Department of Geography - University of Sri Jayewardenepura - Sri Lanka

Report Submitted to Wrap-up Workshop

Held from 21 to 23, October 2010 at Hotel Topaz, Kandy

infrastructure development, livelihood improvement and capacity building of poor people. The project paves way for the rural communities to get together, organize formally, and plan village development by themselves with 50% women participation and 30% youth participation mobilizing self help and community contribution. The model focuses on proper insurance for livelihood activities ensuring village savings are reinvested within the village economy.

The overall aims of this study were; i. understand the nature, operation and management system of gemidiriya project, ii. Identify the livelihood assets of the selected rural communities and iii. analyse the way in which Gemidiriya influence for the improvement of the livelihood of the rural community. It is implementing in 699 Grama Niladari divisions in seven districts such as Polonnaruwa, Hambantota, Monaragala, Badulla, Matara, Galle and Rathnapura. There were 712,685 of total population in 162,833 rural households receive benefits from the project. Badulla district was selected for the study. There were 25 village level people's companies (up to 3rd Batch) in Badulla district. In carrying out of the study, Balagala people's company in Uvaparanagama Field Operating Unit of Badulla district was selected for the in-depth analysis. In Balagala, out of 216 total households, 5, 4 and 207 were ultra poor, poor and medium poor. There were no household belong to rich category according to the asset ranking of villagers. Total of 177 beneficiaries (members) were selected for the sample. Data were gathered using a in-depth case studies, direct observations, formal and informal discussions and from secondary sources.

In overall, there are 175 development projects (i.e. 40 water supply, 84 road development, 22 multi-purpose building, 04 irrigation projects, 09 common wells, 06 sanitation, 05 culverts and bridges) have been started in Badulla district in 2007 which is highest among other districts. Out of 175 of projects, 52 were fully completed, 9, 51, 8 and 55 were 70%, 30%, nearing completed and just started projects, respectively. This field study found that the project has benefited for the improvement of physical assets and livelihood compared to their previous

conditions. Especially, livelihood loans have distributed among 113 poor households including 85 women, 28 men and 19 youth for the improvement of their income generating activities (i.e. vegetable gardening, cattle farming, self-employment, mushroom cultivation, saloon and retail shops etc.). Further, the study ascertain that the project includes very important and salient features like successful rate of community participation, collective decision making at bottom level, benefits for the target groups, better management, monitoring and evaluation systems with compared to other development projects in Sri Lanka. In the light of the above, the study concludes with the suggestions that the necessity of the application of this project as a model for other rural development projects especially for poverty alleviation and rural community development in Sri Lanka.

(2) HM Badra Hearth

Title:

"Application of Satellite Based Remote Sensing for Assessing Deforestation for Strengthening the Implementation of Climate Change Mitigation Policies: Case of North Central Dry Zone Forests in Galgamuwa Area of Sri Lanka".



ABSTRACT

Carbon emissions from deforestation and forest degradation in developing countries account for approximately 20-25% of Global Green House Gas (GHG) emissions. Deforestation implies the conversion of forest to another land use or long term reduction of tree canopy below the minimum 10% threshold. Forest degradation refers to changes within the forest which negatively affect the structure or function of the stand or site. Forest management policies based on reducing emissions from deforestation and forest degradation (REDD+) in developing countries plays a crucial role in pursuing the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC) and in holding the increase in global temperature rise below 2 degrees Celsius above pre-

industrial level. Trading of carbon credits generated by way of avoiding deforestation and forest degradation brings substantial multiple benefits for developing countries including Sri Lanka. Such policy measures for climate change mitigation and adaptation also can ensure the continued delivery of other forest related benefits and ancillary benefits such as poverty alleviation, reduce food insecurity, improve rural livelihoods etc Sri Lanka also has been included into REDD+ voluntary base initiative country list by the UNFCCC in year 2010. However, the challenge faced by Sri Lanka when implementing REDD+ policy is lack of scientific data for establishing baseline information such as magnitude, spatial distribution, factors of deforestation and reduced carbon stocks due to deforestation. The main reason for the information gap is use of improved technologies such as satellite based remote sensing for such kind of analysis occurs at minimal level in Sri Lanka. According to previous studies deforestation and forest degradation is taken place in North western and North Central Province in Sri Lanka at alarming rates. Application of satellite based remote sensing is highly useful for implementation of REDD+ policies in providing baseline information as well as monitoring of carbon reductions of o REDD+ Projects.

The main objective of this study was to assess the severity of deforestation in dry zone forests in Galagamuwa area in North Central Province of Sri Lanka. The land cover over fourteen years were studied by analyzing Landsat TM images acquired in February 1992 and 2006 using ERDAS and ArcGIS. Nine cover classes were selected to study the major cover classes in the study area and to detect changes in the forest cover. Using the supervised classification function ERDAS, land cover maps were produced for different years and the matrix function was used for change detection. Three by Tree majority filters were applied to correct some misclassification.

The total land extent of the study area was 67,5000ha and 4% of the area was under closed forest in 1992 and remain the same in 2006 also. The open forest covers 34% of the land area but it was reduced to 12 % in 2006. These lands were

converted to shrub/grass/homestead category, which the canopy cover is less than 10%. The land area under shrubs increased from 16% to 43% during the fourteen year period. The changes of different cover classes were studied using a change matrix. It reveals that 7% of the closed forests were degraded to open forests and 18% changed to shrub and bare lands. The spatial distribution of the change of open forests shows that this change took place more in the western part of the study area where shifting cultivation is predominant. The intensified shifting cultivation is the main reason for this change. Spatial information generated by this study could be utilized to estimate the carbon stocks reduced due to deforestation. Such information also could be supplemented by socio-economic information to implement REDD+ policy strategies.



(3) Prof. Krishan Deheragoda

Title:

**GIS for Rational Use of Renewable Energy Resources
of Sri Lanka**

ABSTRACT

The development of renewable energy is a hot topic all across the globe. The situation in Sri Lanka is no exception. Sri Lanka is already fostering the production and use of renewable energy through different approaches, as the country has recognised the urgent need to decrease the share of fossil fuel based power generation and increases the share of renewables. Renewable energy is energy generated from natural resources such as sunlight, wind, water, tides, and geothermal heat, which are eternally replenished and never run out.

It is true Sri Lanka is blessed with renewable energy resources in plenty. But this presence itself entails two important questions. Firstly, can all this be utilised for

power generation? Secondly, is the potentially developable share capable of meeting the rising energy demand of 8 – 10% per annum? Probably not, the answer lies in creating the correct mix of energy resources for power generation, inclusive of conventional resources (like fossil fuels, hydro...etc) as well as non-conventional renewable energy resources. Accordingly, it is essential to identify carefully the developable share of renewable energy resources and directing measures towards developing them to realise their full potential. In this context, it is of paramount importance for the Sri Lanka Sustainable Energy Authority (SLSEA), which is the apex agency for promotion of renewable resources to use the appropriate technology such as GIS in order to identify its resource base geographically to enable their rational use.

The absolute ownership of all renewable energy resources in Sri Lanka are vested in the Republic. These resources can be developed by project developers with a Permit obtained as appropriate. The Application for such a Permit is usually processed in 2 steps – firstly, the granting of Provisional Approvals, secondly the granting of the Energy Permits. Such applications are processed by the SLSEA Project Approving Committee, which comprises of Heads of all relevant agencies including the Ceylon Electricity Board, Central Environment Authority, Department of Wildlife Conservation, Forest Department, respective Divisional Secretaries etc.

Geography plays a role in nearly every decision we make. Choosing sites, targeting market segments and planning distribution networks; all of these problems involve questions of geography. A Geographic Information System (GIS) is computer software that links geographic information (where things are) with descriptive information (what things are). Unlike a flat paper cartographic map, where "what we see is what you get," a GIS can present many layers of different information. It integrates hardware, software, and data for capturing, managing, analysing, and displaying all forms of geographically referenced information. Thus GIS allows us to view, understand, question, interpret, and visualise data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts.

The objective of this paper is therefore to propose a GIS model for the SLSEA with a view to serve three stakeholder groups, viz., prospective developers, officers of the SLSEA and Project Approving Committees and Stakeholder Agencies through three tier platforms (*on ArcGIS*) namely the Geodatabase (*Comprehensive GSI*), the Online Internet GIS Facility (*for the Developers*), and the Intranet GIS Facility (*for the SLSEA and Official Stakeholders*).

The proposed Geodatabase is based on digital topographic maps (1:50,000) blended with information gathered from other relevant institutions. The salient feature of this database is that it permits the retrieval of project attributes at a single click, which otherwise, if performed manually would be very time consuming and cumbersome. The database also consists of a rainfall map capable of retrieving rainfall data of the past 30 years at any given location. These digital maps enable the SLSEA and the Developers to crosscheck whether the selected sites overlap extant environmentally and ecologically sensitive areas. The Online Internet GIS Facility permits Developers to access selected, useful information pertaining to renewable energy project development, where as the Intranet GIS facilitates sophisticated in-house project evaluation at the SLSEA level enabling to facilitate progress monitoring, filtering and right-sizing projects and planning renewable energy dispatches.

The main outcomes expected from this GIS are as follows: a) Systematical storage of existing and proposed mini-hydro power plants and other sustainable energy resources; b) Integration of factors such as elevation data, hydrological network, rainfall, electricity grid, forest and other reservations with the system including regulatory information, enabling suitability analysis through the application of multi-criteria overlay techniques; c) Use of 3D analysis capabilities in GIS in hydrological modeling and analyses such as water head, flow rate calculation etc.; d) Production of both maps and tabular reports enabling reliable, quick and more

**Sida/SAREC RESEARCH COOPERATION PROJECT ON REGIONAL IMBALANCES & POVERTY
ALLEVIATION**

Department of Geography - University of Sri Jayewardenepura - Sri Lanka

Report Submitted to Wrap-up Workshop

Held from 21 to 23, October 2010 at Hotel Topaz Kandy

strategic decision making; and e) To function as a 'One-Stop-Shop' for the development of renewable energy sector in Sri Lanka.

SECTION SIX

GLIMPSES FROM Sida/SAREC RESEARCH COOPERATION

CAPACITY BUILDING



Founder Project Leader Prof. MM Karunanayake & Professors YADS Wanasinghe & MDC Abhayaratna with Swedish Counterpart Dr. Clas Lindberg at Uppsala University, 1999



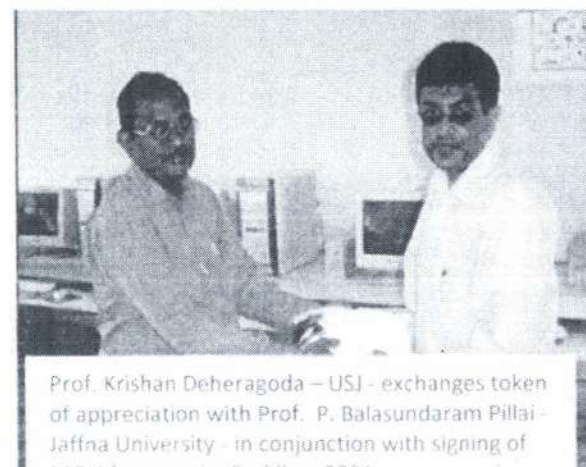
Doctoral Student DPS Chandrakumara at a supervisory session with Dr. Susanne Stenbacka, 2006



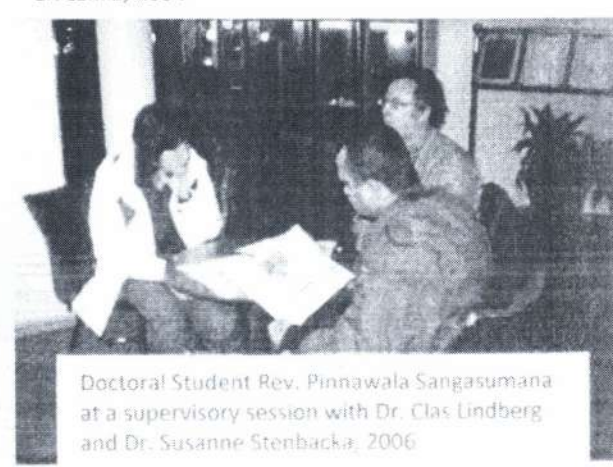
Doctoral Student Rev. Pinnawala Sangasumana at a discussion with his supervisor Prof. Gunnar Olsson at IDP Camp in Kebithigollewa – NCP - Sri Lanka, 2006



Prof. MM Karunanayake Addresses Staff and Students of the Department of Geography-University of Jaffna- Sri Lanka, 2004



Prof. Krishan Deheragoda – USJ - exchanges token of appreciation with Prof. P. Balasundaram Pillai - Jaffna University - in conjunction with signing of MOU for capacity Building, 2004



Doctoral Student Rev. Pinnawala Sangasumana at a supervisory session with Dr. Clas Lindberg and Dr. Susanne Stenbacka, 2006

CAPACITY BUILDING



Prof. Lennart Stromquist of Uppsala University inspects Mahaweli Development Model with Sri Lankan counterparts, 2002



Rapid Appraisal of the status of Inbetweenness of the IDPs in Horowpothana-NCP- Sri Lanka by the researchers of the Project, 2005



Application of Participatory GIS with a Tsunami affected community at Rekawa in Sothern Sri Lanka, 2008



Strategizing the capacity building agenda of the graduate students by the USJ - Geography, 2006

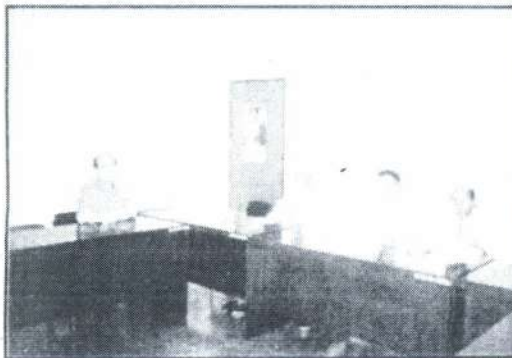


Happy moment after a capacity building workshop at the USJ - Department of Geography, 2005

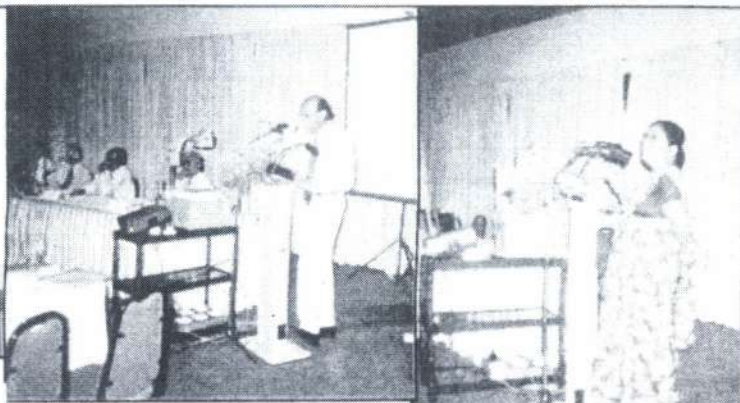


Doctoral Student Rev. Pinnawala Sangasumana inspecting the preparations for sheltering the IDPs during the last phase of the conflict - Menik Farm - Vavuniya - Sri Lanka, 2009

SEMINARS & DISSEMINATION OF KNOWLEDGE



Meeting at Regional Centre for Sustainable Development (RCSD) at the University of Chiang Mai, 2000



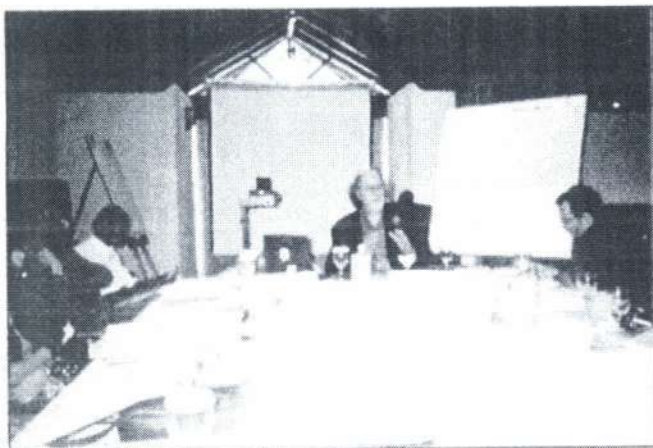
Addressing the Audience by USJ Department of Geography Colloquies at a Seminar in Hotel Galadari – Colombo, Sri Lanka, 2001



At the Seminar on Information Technology for Regional Development held at the University of Karlstad, Sweden, 2001



Conference on Public and Private Sector Partnership: Exploring Cooperation, held at University of Karlstad, Sweden, 2002



Conference on at Hotel Earls Regency, Kandy – Sri Lanka, 2002



Doctoral Student RMK Ratnayake making a presentation at the Department of Social and economic Geography - Uppsala University, Sweden, 2002



Workshop on Regional Development Experience in Sri Lanka: Retrospect and Prospect at Hotel Galadari - Colombo on 13th & 14th August 2004



Seminar on Regional Development in Sri Lanka: Resetting the Agenda, on 1st October 2005 at Hotel Galadari - Colombo to coincide with the Launching of the Fourth publication of the Project



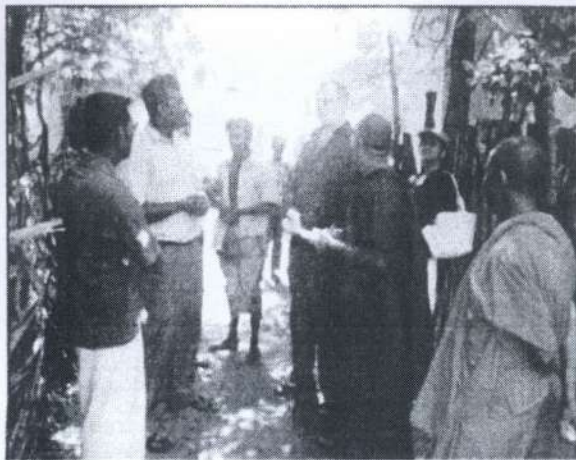
Rev. Pinnawala Sangasumana presenting a research paper at International Conference on UNLV - Thailand, 2010.



The Project Leader Prof. Krishan Deheragoda Making a presentation on Engendering Energy Poverty at ESCAP - Bangkok, 2010



Field inspections at Eppawala - NCP - Sri Lanka - 2000



Field inspection of Muslim IDP camp in Puttalam - NWP - Sri Lanka - 2006



Field inspections at Horowpothana -NCP - Sri Lanka - 2005



Research on Post Tsunami Reconstruction process at Midigama - Matara - Southern Sri Lanka, 2005



Discussion on the peace process at the LTTE office - Jaffna, 2004



Visit to SL Army headquarters at Palali - Jaffna, 2004

RESEARCH



Project researchers at work in Meewellewa - NCP - Sri Lanka - 2005



Rushing to a field work inspection at Rajanganaya - NCP - Sri Lanka, 2007



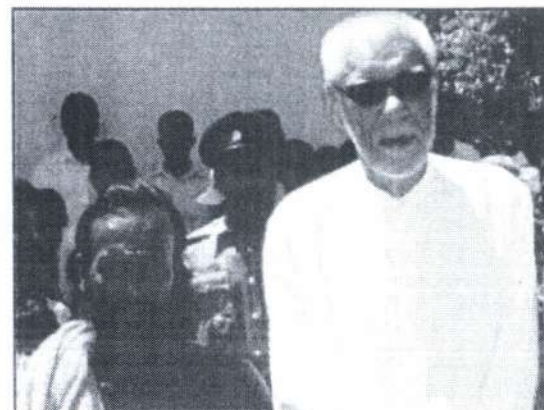
Project leader Dr. Clas Lindberg together with his Swedish colleagues at work at Rekawa Lagoon in Southern Sri Lanka, 2005



Searching for the roots of Inbetweenness of IDPs at Kebithigollewa - NCP - Sri Lanka - 2006



Aboriginal Vaddah Clan at Rathugala Uva Province, 2009



Prof. Gunna Olsson with Aboriginal Vaddah Chieftain of Rathugala Clan - Bibila - Uva Province, 2009

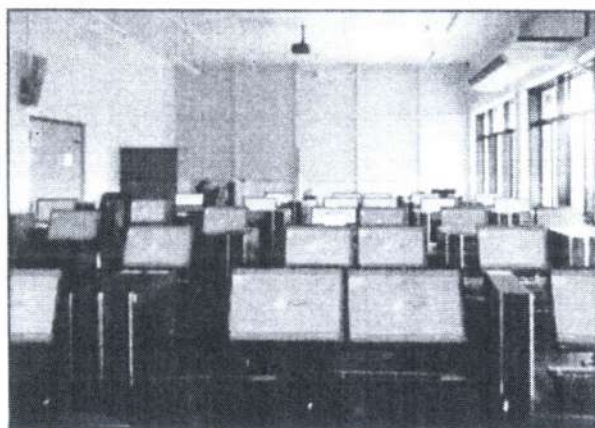


In front of a Traditional home of Sami people in Northern Sweden (*one of the largest indigenous ethnic groups in Europe*), 2008



The Project leader Prof. Krishan Deheragoda with Prof. K. Kugabalan at the Jaffna University during a study on post-conflict reconstruction, 2010

INFRASTRUCTURE DEVELOPMENT



A State of the Art GIS Teaching Laboratory



GIS Data Bank & Research Laboratory



Student's Resource Centre



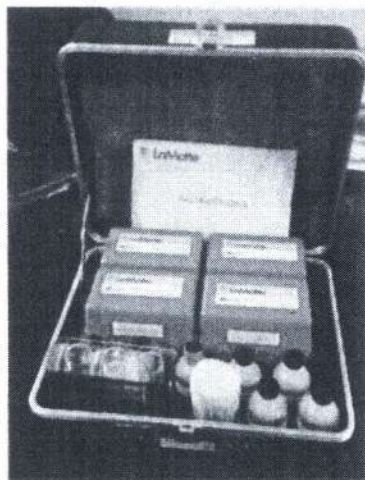
Discussion Room



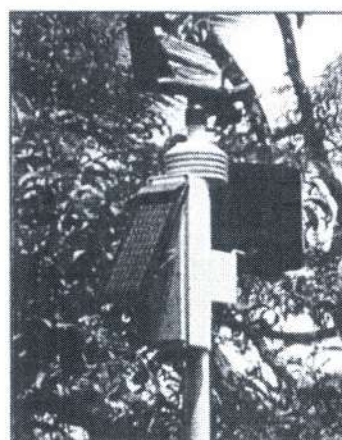
Experimenting at the Soil Laboratory



Latest Collection of the Rock & Mineral Samples



Laboratory Testing Kit



Fully Computerized Weather Station



Fully Loaded Mobile Research Station in a 52 Seater Bus



GPS to Support GIS based Research & Development