（For JSPS Fellow）

Form B-5

Date（日付）
　　23/12/2014　　　（Date/Month/Year：日/月/年）

Activity Report -Science Dialogue Program-
（サイエンス・ダイアログ事業　実施報告書）

- Fellow's name（講師氏名）:　 D.D.G.L. Dahanayaka　　　　　　　 （ID No.　P　13045　　　）

- Participating school（学校名）: Tokyo Metropolitan Tama High School of Science and Technology

- Date（実施日時）:　　　　　　　　　　22/12/2014　　　　　　　（Date/Month/Year:日/月/年）

- Lecture title（講演題目）:（in English）Remote Sensing Applications for Water Resources Management
　（in Japanese）水資源管理のためのリモートセンシング応用

- Lecture summary（講演概要）: Please summary your lecture 200-500 words.

<u>My Country</u>
Sri Lanka is an island located in the Indian Ocean, just off the southeastern coast of India. It`s capital is Sri Jayewardenepura kotte. It has a population of about 20 million people. The island is rich in natural resources, and has a diverse economy based on agriculture, mining, fishing, manufacturing, and tourism. It is rich and varied landscapes of lush green jungles, cool refreshing hills, sun drenched beaches and warm friendly people. The official Languages are Sinhala, English & Tamil. Most Europeans like the quality tea produced in the country.

<u>Why is English Important as a Scientist?</u>
English is important in Science for many reasons, generally for communication. The only way that scientific progress is made is when scientists communicate their ideas, their experiments and their results. To do so, you need a strong grasp of the language that most other scientists use to communicate. You can be as intelligent as you want, but if you haven't got good English (or language) skills, nobody will ever learn about your findings. In the scientific career, you will generally share findings in the form of scientific journals. Your articles have to be interesting enough to be accepted into these journals, or nobody will read them.

<u>My research achievements</u>
By now I have authored 2 books, 15 research papers and 3 short communications in refereed journals. I also presented more than 40 papers in scientific symposia/conferences. The abstracts or extended abstracts of these had been published in the proceedings of these symposia/ conferences. For my research and academic activities so far I have been traveled more than 20 countries. And also I am a member of several professional bodies and served as an expert on fishery related organizations. I have experienced in securing and handling collaborative projects with local and international counterparts and conducting workshops, seminars, and lectures.

<u>Current Research output</u>
During present study, water quality retrieval algorithms were successfully developed to the study sites using satellite data. Initially, development of algorithms supported from in-situ water quality data and after several validations now those water bodies can be monitored using only from satellite data (with out in-situ data) with benefit from the proposed algorithms. It is great advantage for the future predictions and reduces expenses and labor force for the additional field works. Results were successfully able to describe environmental issues, which were associated with these water bodies. Trend analysis of more than 20 years showed that environmental degradation and increase of some localized environmental impacts of such water bodies. Remedial actions and future measures were highlighted according to results, for the

improvement of water quality of these study sites which is important for the biodiversity conservation, fisheries management, aquaculture development and expansion of ecotourism etc. Land use changes, environmental degradations due to anthropogenic events and natural phenomena successfully explained in associated ecosystems and water environments of the study areas using proposed algorithms.

- Language used（使用言語）:　 English

- Lecture format（講演形式）: PowerPoint presentation
   ◆Lecture time（講演時間）90　min（分）, Q&A time（質疑応答時間）30 min（分）
   ◆Lecture style(ex.: used projector, conducted experiments）
      （講演方法（例：プロジェクター使用による講演、実験・実習の有無など））
         Presentation using projector
   ◆Interpretation(ex.: assistance by accompanied person, provided Japanese explanation by yourself)（通訳（例：同行者によるサポート、講師本人による日本語説明））
         上原　貴広 (UEHARA TAKAHIRO)
   ◆Name and title of accompanied person（同行者 職・氏名）
         上原　貴広 (UEHARA TAKAHIRO), M2 Student, Ibaraki University, Hitachi
   ◆Other note worthy information（その他特筆すべき事項）:

- Impressions and opinions from accompanied person（同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。）: