A PROPOSED PROGRAM ON WEATHER/CLIMATE, ENVIRONMENT IN TEA

ECOSYSTEMS IN SRI LANKA

Quarterly Progress Report Summary

December 15 2017 to March 15, 2018

Work on this project has gone as planned with more progress in some areas than anticipated. The highlights have been engagement with Dilmah Conservation personnel and with the compilation of a general introduction to the topic of climate and tea, the engagement with some key personnel and agencies, and compilation of sources of basic aggregate data.

Here we summarize the outputs compiled in relation to the deliverables in the first quarter. Deliverables included under the first three objectives included Interim/Draft reports on

1. Assessing Climate information needs / Resources for tea sector.
2. Compilation of Tea Sector Data
3. Compilation of Climate Data related to Tea Sector

1. Assessing Climate information needs / Resources for tea sector.
    a. Engagement with Tea Sector:

We had meetings with experts in tea research, met with a few tea estate superintendents and overseers and have visited three estates in Central Province, Sri Lanka. A summary of the institutions, and estates visited is below. A list of the institutes contacted, estates visited and contacted persons, detailed information compiled and attached as (Annexure 01)

i. Dr. Zubair and Prof. Wickramagamage have met three times with the Dilmah Climate Change Council and Prof. Wickramagamage joined in the opening ceremony of the Dilmah climate observatory
ii. We have obtained advise and input from the Dilmah Conservation Manager Mr. Asanka Abayakoon in person, by phone and via email
iii. We have met four times with the Superintendent of the Queensbury Estate (Mr. Nayanajith)
iv. Project Staff have undertaken consultations during five visits to Queensbury Estate
v. Project Leader and Staff have visited Doteloya Estate in Aranayake twice to obtain data and advice
vi. Project Leader and Staff have visited Duckwari Estate in Rangala to obtain climate data and advice
vii. Project Leader and Staff met with TRI staff members from Talawakelle, Ratnapura and Hanthana at the Plantation Exhibition.
viii. A list of plantations with Dilmah relationships and those without has been assembled and after consultation with Dilmah Conservation some of these shall be visited for data and possible engagement for research.

b. Review Past Research and Understanding
    i. A comprehensive search was undertaken of the scientific literature on the topic of climate and tea both in Sri Lanka an internationally was undertaken. We have searched the national databases (University of Peradeniya, Department of Agriculture, Sri Lanka Council on Agricultural Research, and National Science Foundation) and the international databases that are available through databases and in the University of Peradeniya and Columbia University Libraries. We are still on the hunt for a more key books and journal articles.
c. A review of these research and understanding has been prepared by way of an introductory document which is being submitted in draft form here. The literature that was accessed above is included at the end of this report.
d. Establish Climate Information Needs for the Tea Sector
    i. Initial work has been undertaken reviewing the past international and local reports on the impact of climate on tea. While there are lots of laboratory studies, and qualitative description of the potential climate impacts, we find that the existing analysis impacts of climate need to be dramatically improved.
    ii. We have a few anecdotal accounts of the impact of climate on the tea sector from the experienced planters put in content with the other factors that prevail here. A much more systematic interrogation of the planters needs to be undertaken.
    iii. Statistical Analysis was undertaken to establish the sensitivity of yield and production and yield at an aggregate where sufficiently long data records were accessible to us. This included the national data and the compilation of data by elevation regions (low, mid and high grown). The reports from these were presented as a research paper.
    iv. We are now seeking longer data for analysis at a finer spatial scale (e.g. Districts, Tea Districts, and Estates). These are harder to come by. We are also seeking data as proxies for quality - price, disease, and data on management changes to assist with the analysis.

2. Compilation of Tea Sector Data
    a. We have obtained an initial list of possible data sources including Dilmah owned companies, other plantation companies and plantations
    b. From the literature, we have identified 6 estates that are well distributed climatically in Sri Lanka for which we shall focus data gathering
    c. Metadata on the available data from various sources have been compiled
3. Compilation of Climate Data related to Tea Sector
    a. Metadata on the available data from various sources have been compiled

Assessing Climate Information Needs - Resources for the Tea Sector

In order to increase the engagement with Tea Sector, we had meetings with experts in tea research, met with a few tea estate superintendents and have visited three estates in Central Province, Sri Lanka.

Summary of the events

- Dr. Zubair and Prof Wickramagamage Participated in meetings with Dilmah Climate Change Council (on 14th September 2017 & 17th October 2017) and joined in the opening ceremony of the Dilmah climate observatory (on 28th October 2017) to discuss about the future objectives of the proposed project with Dilmah Conservation Manager Mr. Asanka Abayakoon.

Institutes:

- Tea Research Institute of Sri Lanka

The Project Leader and Staff met with Tea Research Institute staff members from Talawakelle, Ratnapura and Hanthana at the CRT (Coconut, Rubber, Tea) Trade Fair, the Sri Lankan Plantation industry's premium trade fair 2017 on 11.8.2017 with the purpose to engage with experts in tea research. We met with,

  - Dr. Wijerathne, Principal Research Officer, Officer-in-Charge (Low country Regional Centre)
  - Mr. Kahandawa, Acting Officer-in-Charge Advisory officer, mid country Regional Center.
- University of Peradeniya
  - Dr. Janaki Mohotti, Senior Lecturer, Department of Crop Science, Faculty of Agriculture.

Estates:

- Duckwari Estate, Rangala

The Project leader and staff visited the Dukwari estate, situated in Rangala Sri Lanka in order to obtain climate data as well as advice from experts. We met with,

  - Mr. Oliprakash, (Chief clerk)
  - Mr. Rajendran, factory superintendent
- Doteloya Estate, Sabaragamuwa, Sri Lanka

The Project leader and staff visited the Doteloya estate twice, situated in the Sabaragamuwa district Sri Lanka in order to obtain climate data as well as advice from experts. We met with

  - Mr. Sudharshan
  - Mr. Ukesh
  - Mr. Rajendran

• Queensberry Estate

The staff under took five visits to the Queensberry estate and to the Climate observatory of the Dilmah conservation for consultation and weather station installation. (On 16th August 2017, 25th October 2017, 28th October 2017, 6th February 2018 & 28th February 2018)

Contacts: Mr. Nayanajith: Superintendent of the Queensbury Estate

Dr. Zubair and staff at the Doteloya estate

Dr. Zubair at the Duckwari estate

Staff of Tropical climate at the Queensberry estate, Nawalapitiya