Living Polders: Dynamic Polder Management for Sustainable Livelihoods, Applied to Bangladesh

Field Visit to Khulna: Laboratory Analysis in Khulna University (Eleventh Field Visit)

Conducted during: 22 – 27 September, 2018

Prepared by
Nureza Hafiz
Research Assistant, Living Polders Project
Institute of Water and Flood Management, BUET.

Institute of Water and Flood management (IWFM)
Bangladesh University of Engineering and Technology (BUET)

General Information

Project Name: Living Polders: Dynamic Polder Management for Sustainable Livelihoods, Applied to Bangladesh

Date of Visit: 22 – 27 September, 2018

Visited places:

- Khulna University Laboratory (23 – 26 September, 4 days)

Conducted by
Nureza Hafiz
Research Assistant, Living Polders Project
Institute of Water and Flood Management, BUET

MD. Monoarul Islam
Student
Environmental Science Discipline, Khulna University

Ms. Morzina Akter
Lab registrar
Environmental Science Discipline, Khulna University

Supervised by
Dr. M. Shah Alam Khan, Project Leader, Living Polders
Professor, Institute of Water and Flood Management, BUET, Dhaka- 1000, Bangladesh.

Locally supervised by
Dr. Dilip Kumar Datta
Professor, Environmental Science Discipline, Khulna University, Khulna, Bangladesh.

Introduction

The sediment deposition and water quality varies with location and time. As it is needed to understand the variation in sediment and water quality in some selected areas, we collected samples in two seasons- dry and wet. In the last field visit on July 2018, we have collected wet season samples. The collected deposited sediment and water samples were taken to Khulna University laboratory and are being analyzed.

This field visit was aimed to understand the lab condition and analyze the parameters.

Description

Laboratory work (23 – 26 September)

The wet season sediment sample of Beel Pakhimara was collected on August and left for drying in the open air. On 23 September, about 13 sediment samples were ground and sieved for future analysis. We prepared about thirty two sediment sample solutions for analyzing available Sodium, Magnesium, Calcium and Potassium.

The next day, we again worked for preparing about thirty one sample solutions. We also prepared twenty six sediment samples in total, for measuring pH and EC.

On 25 September, we started analyzing available Calcium by titrimetric method. We measured available Potassium by flame photometer on the next day. The pH of the sediments was also measured by using HI 2211 pH/ORP meter.

Discussion

Everything went well as planned. Working in such a friendly environment was of a great pleasure. I am looking forward to work in the Khulna University's 'Global Change Research Laboratory' again.

Photos

Image 1: Preparing sediment samples (Grinding and Sieving)

Image 2: Filtration process

Image 3: Available Ca analysis by titration method

Image 4: Flame photometer

Image 5: Preparation of sample for Potassium analysis

Annex

Field visit Plan

Date	Descriptions	Remarks
22 September 2018	Leaving for Khulna	
23-26 September 2018	Arriving in Khulna and Lab Analysis	
27 September 2018	Arriving in Dhaka	