

Erasmus+ ICM Project between University of Glasgow and University of Dohuk – July 2019

The Environmental Impact of Conflict and Landmine Clearance in Kurdistan region – Iraq

By Dr Sizar Abid Mohammed

First day at 12 July I met with Professor Marian Scott in School of Mathematics and Statistics in her office we discussed our case study in Duhok on the subject of landmine and electric generator and how we can study these cases and come up with publication and about R Statistics program. She gave me some topics about using R as well as a book about an introduction to using R.



Professor Marian Scott in School of Mathematics and Statistics

She also arranged for a meeting for me on **16, and 18 July** with **Professor Janine Illian** and **Dr. Ben Swallow**. The meetings that i had with Janine and Ben were very good and fruitful and project. They gave me some statistics topic and chapter to study to gain more information about point process theory and models, as well as a few good books about statistics program R resources. and we had a discussion about Landmine data and Data we would require:

Modelling approach:

- Treat landmine locations as spatial point pattern
- Model will model the locations of removed landmines to predict landmine locations (intensities) in uncleared fields
- Model with a spatial point process model (most likely using the software package inlabru in R)
- Initially we will fit a simple (non-spatial) regression model with a Poisson outcome (counts in cells) to a single mine field. We will later extend this to a proper spatial model for all mine fields.

Data we would need:

- Spatial boundaries of the mine fields – both cleared and not cleared
- Locations of where the individual mines were found and cleared. This would be **GPS** locations for example.
- Other explanatory variables/covariates. For example: Distance from nearest village, road, border
- Any other things you think may be important for example vegetation, soil type, whether the field is agricultural....

Can you ask your contacts what they think would be important as an explanatory variable? this will be ongoing discussion with you and the organization.



Professor Janine Illian and **Dr. Ben Swallow** School of Mathematics and Statistics

On 18th July, I met with **Dr Vicki Dale** in Learning and Teaching Centre, She is a Senior Academic and Digital Development Adviser (University Lecturer) (Learning Enhancement & Academic Development Service). We discussed e-learning and Moodles. She gave me lots of useful information about it and gave me many links on Accessibility of e-learning, Open education course, Moodle Lynda.com video, Teacher quick guide for Moodle, latest version of Moodle, guidance exists for earlier versions too, Types of activities (to emphasize focus on active learning and student engagement), Some good practice guides (university guides for using Moodle uniformly across courses), Open Learn Create free access to Moodle, Class Central: Learn Moodle 3.7 Basics, Class Central: Learning to teach online, Class Central – range of free online courses. She also presented me with some books and links of book about Moodle : Moodle 2.0 course conversion: beginner's guide : a complete guide to successful learning using Moodle 2.0.

I gained much knowledge from my meeting with Dr. Dale and gained an insight on using Moodle and E-learning.



Dr Vicki Dale in Learning and Teaching Centre

On 18th July I also met with **Dr. Ismail Ozgur Zembat** in school of Education at we discussed the pursues research in Mathematics Teacher Education, Mathematical Concept Development and Mathematics Curriculum Development, and the nature of Specialized Content Knowledge for Mathematics Teachers.

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