NATURAL HISTORY MUSEUM OF ZIMBABWE

INTRODUCTION TO ECOLOGICAL NICHE MODELING: THE MAXIMUM ENTROPY APPROACH

30 OCTOBER TO 3 NOVEMBER 2017

Day 1 **(Monday 30 October 2017)**	08:30 – 9:30	**Tour of the Museum**
	9:30 – 10:30	**Registrations for MAXENT workshop, Networking and Morning Teas**
	10:30-12:30	**Morning session: START OF MAXENT WORKSHOP** • Introductions • Back ground to the Global Biodiversity Information Facility (GBIF) and the Biodiversity Information for Developments program (BID) • Accessing occurrence records from GBIF and opening in Excel • Course overview • Options for analysis and Species Distribution models • Introduction to Maxent Modelling
	14:00- 16:00	**Afternoon session:** • Downloading and installing MaxEnt, ArcMap, R studio and R Software and Java. • MaxEnt Memory Management
Day 2 **(Tuesday 31 October 2017)**	08:30 – 9:00	**Registration**
	09:00- 12:30	**Morning session: Data preparation** • Preparing the Species Distribution Data for MaxEnt • Species data formatting for MaxEnt
	14:00- 16:00	**Afternoon session: Data preparation** • Preparing the Environmental variables for MaxEnt • Convert environmental layers to ASCII • Preparing the bias or background layer I

GBIF Global Biodiversity Information Facility

The BID programme is funded by the European Union and co-funded by GBIF

Day 3 **(Wednesday 1 November 2017)**		**Registration** **Morning Session Background on Multi collinearity** • **What is collinearity?** • **Why is it important in SDMs** **Afternoon session** • **Practical on collinearity**
Day 4 **(Thursday 2 November 2017)**	08:30 – 9:00 09:00- 12:30 14:00- 16:00	**Registration** **Morning session: Running MaxEnt using MaxEnt software** • MaxEnt Settings I - Interface at Launch • MaxEnt Settings II - Basic Settings • MaxEnt Settings III - Advanced Settings • MaxEnt Outputs and Features Notes **Afternoon session:** • Running MaxEnt from R Studio **Results Interpretation** • Introduction • Model Evaluation • Prediction maps • Response Curves • Assessing variable importance examining the results and interpretation
Day 5 **(Friday 3 November 2017)**	08:30 – 9:00 09:00- 12:30 14:00- 16:00	**Registration** **Morning session:** Result preparation in ArcGIS/QGIS **Afternoon Session:** Result presentation in ArcGIS/GIS **Practical with own data** Recap and any other activities Closing remarks

Morning tea (Day 2 – Day 5): 10:00 –10:30 Lunch: 12:30–14:00 Afternoon tea: 16:00–16:30