

Curriculum Vitae

Rod Towner Geospatial Analyst and Trainer

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Rod has over 10 years of experience in Geographic Information Systems in a variety of contexts including the humanitarian field, disaster response and health emergency mapping. His experience includes working as a GIS Analyst within the WHO Ebola response team in 2015 and the WHO WHE programme in 2018. Subsequent to this has worked in an ongoing as-needed capacity as a GIS training facilitator for WHO. This includes preparation of GIS training programs/objectives, development of training content, delivery of face to face training, and provision of ongoing remote support.

He has strong technical GIS skills including ArcMap, ArcGIS Online, field data collection tools and QGIS, as well as advanced data management experience including SQL, other database platforms and spreadsheet data management.

Rod's focus is on developing practical, easy to understand and usable GIS products as well as preparing GIS training clearly targeted to the recipients capabilities and needs.

Rod's background is as a water and sanitation engineer including in the field for disaster response, implementing practical field-based GIS products.



Key Skills

- Health and emergency mapping
- GIS training facilitation
- GIS training materials and remote support
- Data management
- Data collection and analysis

GIS Training Facilitator – World Health Organization, 2018-Current

Facilitator for a number of training initiatives including:

- Introductory 4 day GIS workshop in Manila, Philippines focussing on GIS principles, ArcMap, ArcGIS Online, mobile data collection and dashboard data presentation
- Training of trainers GIS 5-day workshop in Cairo, Egypt presenting more advanced GIS skills including data management tools, GIS standards and procedures, Spatial Analyst extension and detailed spatial analysis tools
- Ongoing one-to-one training to support mobile data collection for vaccination programs in Somalia
- Ongoing one-to-one training for preparation of dashboard information products for applications throughout the pacific region
- Participations in strategic organisational GIS training needs discussions and ongoing training plan development

Facilitation of these training initiatives included:

- Meeting with the training team to develop training objectives. This included surveying and discussing with participants.
- Development of a training schedule or program to allocate different sessions to be covered.
- Preparing training materials such as presentations and hands-on activities.
- Delivery of training sessions including presentation of sessions and demonstration of hands-on activities
- Evaluating training activities after completion and providing input into refinements for future training programs.

In facilitating a range of training initiatives Rod focussed on developing practical hands-on exercises to supplement technical information based sessions. He then prioritises time in the training program for participants to contribute to developing their own mapping and data management products.

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GIS Analyst – World Health Organization WHE Programme 2018, Geneva, Switzerland

Co-ordination and development of a range of mapping and data products. This involved working with a range of stakeholders, internal and external to WHO, to bring together accurate and relevant data and tailor products to suit the intended application.

In particular, Rod was involved in the response to the 2018 DRC Ebola outbreak. This included the initial stage of the response where he was involved in establishing the spatial data collection, storage, analysis and presentation system.

In addition to the experience gained previously during his involvement in the 2015 Ebola outbreak he was involved in the following:

- Development of a data hub using the ESRI open data platform, including ongoing maintenance and training of the users of the hub.
- Co-ordinating between different agencies and partners regarding the sharing and collaboration of spatial data.
- Analysis of non-spatial data with relation to Key Performance Indicators. This involved working with a team to develop a data management and preparation framework to suit the needs of those deployed to the field, then implementing this through the Google Sheets Application and training field staff in appropriate data entry.
- Providing support and guidance to junior colleagues and temporary support staff from external agencies.

GIS Analyst – World Health Organization Ebola Response 2015, Geneva, Switzerland

Co-ordination and development of a range of mapping products for both internal and external recipients, including static maps as well as online/interactive mapping products:

- Map production using the ArcGIS Desktop software package.
- Maintenance of database systems using Microsoft SQL Server platform.
- Online publishing of interactive maps using ArcGIS Server and ArcGIS Online.
- Administration of corporate ArcGIS online accounts.
- Mentoring and training of junior staff members.
- Co-ordination of in-field spatial data collection.

- Liaison with relevant teams internal to WHO as well as external parties to tailor mapping products to particular needs.
- Liaison with ESRI to implement innovative GIS tools such as interactive mapping products.
- Interpretation and analysis of epidemiological data such as mortality rates and identification of spatial trends.

GHD Australia 2008 - 2010, 2011 – Current

Rod is employed by GHD as a senior consulting engineer and a regular advanced level GIS user including the following key projects:

Centennial Water Operations

Collation of topographical information to develop a surface profile raster. ArcGIS assessment of raster to estimate catchment areas, flow paths and changes to surface profiles due to mining. Automation of data analysis tools. Use of 3D analyst and Spatial Analyst extensions.

Marsden Park Industrial Precinct

Flooding assessment of proposed precinct including collating available GIS information, preparing inputs for flood modelling and mapping of flood results. Identification of potentially affected landholders through automated ArcGIS tools providing analysis of deposited plan information

Horizon Resources Papua New Guinea

Review and analysis of available broad-scale spatial information for a remote environment. Including the use of a webviewer application for viewing published data. Multi-criteria spatial analysis for appropriate site location selection.

Southern Sydney Waste Facility

Water quality assessment involving the co-ordination of automated collection of site monitoring locations and data presenting a map of monitoring locations to accompany monitoring results.

NorthParkes Mine

Flood assessment using the HECGeoRAS ArcGIS tool as well as preparation of flood maps and utilisation of online basemap information.

HiQuality Waste Facility

Preparation of maps using ArcGIS for dust and air environmental assessments including spatial assessment of key environmental receivers.

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Riverstone Alex Avenue Land Release

Drainage planning for a large proposed urban area including collation of GIS data and preparation of ArcReader maps for non-GIS users to access information.

Tamworth Stormwater Harvesting Scheme

Hydrological assessment using ArcGIS to estimate catchment areas based on both manual interpretation of contour information and automated catchment generation through 3D Analyst tools.

Goulburn Valley Freight Logistics Centre

Management of site specific data and preparation of maps using MapInfo.

Northern Territory Rare Earth Mine

Use of ArcGIS to analyse satellite topographic information and estimate catchment areas for a large remote site.

Zor Engineers Pakistan 2010-2011

Rod was employed by Zor Engineers in Karachi as an engineer working primarily in response to the 2010 flooding event, with relevant projects including:

Partner Aid International– Latrines and Wash Stations - Design and Construction

Design and construction management for the provision of latrine, wash station and groundwater pump facilities in rural villages. This included collation of geo-spatial field data including housing and community locations and compilation on a project map using AutoCAD.

Zor Engineers AutoCAD Training Program

Development and implementation of a training program to transition the organisation for hand drafting to use of AutoCAD. Involved daily sessions where Rod lead an informal lesson on the principles and practice of AutoCAD, as well as one- on-one mentoring of staff and review of staff performance.

Rawalpindi Leprosy Hospital– Village Hydroelectric Restoration

Design of the reconstruction of a flood damaged hydroelectric water supply channel. Included the assessment of spatial information to estimate catchment areas and the proximity of residents to the proposed works.

Innovative Humanitarian Solutions– Temporary IDP Camp Latrines – Design and Construction

Design and construction management for the provision of temporary pit latrines in an Internally Displaced Persons Camp during the preliminary stages of disaster recovery. Particular experience gained in the monitoring of people movements in the preliminary phase following a disaster.

Partner Aid International– Organisation Strategic Planning

Consultant engaged to assist in strategic planning of upcoming projects. In particular, this included general advice on organisational information management including spatial information.

Qualification

B Eng (Civil) Hons 1
University of New South Wales, Australia

Publications

Outbreak of Ebola virus disease in the Democratic Republic of the Congo, April–May, 2018: an epidemiological Study, The Ebola Outbreak Epidemiology Team

Language

Native English speaker with advanced reading, writing and communication skills

References

Yurie Izawa - WHO
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