Background Information

Introduction to the 2011 APMEN GIS Training Program
The 2011 Asia Pacific Malaria Elimination Network (APMEN) Geographical Information System (GIS) Training Program is a training program organised by APMEN in collaboration with: MAP /Oxford University, University of Queensland, and the National Institute of Parasitic Diseases, Chinese Center for Disease Control and Prevention (NIPD, China CDC).

The lack of a specific training program on how GIS data can be used to improve understanding and decision making in malaria elimination in the Asia Pacific region was raised as a capacity building issue at the second annual APMEN meeting in Kandy, Sri Lanka, in 2010 and during the more recent meeting in Kota Kinabalu. Under the auspices of APMEN, a short training program has been established to offer standardized basic theoretical training on the application of GIS to monitoring, evaluation, and surveillance. In July 2011 a working group was established to guide the development of this one off training program which following evaluation may be continued and expanded to include more advanced training.

The course provides participants with basic skills in Geographical Information System (GIS) and will focus on how advances in mapping, GIS database, Decision Support System technologies, and progress in spatial and tempo-spatial modeling, can be harnessed to work towards efforts to eliminate malaria. Emphasis will be on the methodology and practical application of epidemiological tools, the interpretation of data, and on the decision making that ensues.

Fortnightly virtual in-country support will be available for 3 months following the course so that attendees can apply and implement course methods using malaria data from their home country. The course participants will be encouraged to interact via email and virtual meetings using public domain conference software supported by some of the course presenters. The aim is to enable real world learning by presenter-mentored application of GIS technology and trans-boundary collaboration. We have purposely engaged presenters and facilitators from the region and from APMEN Partner Institutions.

What is the purpose of the Course?
This course will be useful to malaria professionals from various disciplines who make use of spatial information to better understand their discipline and the environment in which they operate. It will also assist in making informed decisions in the real-world based on viewing, querying, analyzing and communicating spatial data in a malaria elimination context.

Level of training
The level of training that will be provided will be basic but the completed individual learning needs survey and the APMEN Country Partners GIS capacity survey will guide the content presented.

Course Organisation

Course Participants
Each APMEN Country Partner is asked to nominate two country representatives to attend the course. There will be a maximum of 30 participants.
Participant Entry Requirements
Level of responsibility: Malaria personnel from various fields from an APMEN Country Partner and or Partner Institution with basic experience in GIS and malaria programs management.

Language proficiency: The course will be conducted entirely in English, and therefore a good command of written and spoken English is essential.

Computer literacy: Demonstrated ability to use word processing, spreadsheet and/or database software. Participants will be encouraged to bring data on malaria from home health units to apply course principles and compile a GIS reference database. Desktop computers will be available at the course venue during the course. Participants may also bring their own computers. Software will include open access freeware.

Course Dates and Venue
This five day interactive course will run from November 7 – November 11, 2011 at the National Institute of Parasitic Diseases Chinese Center for Disease Control and Prevention, Shanghai, People's Republic of China. The course will use a variety of teaching and learning strategies; lectures, computer lab, field trips, discussion, case studies, and demonstrations.

Course Content

Course Structure
The essential topics in the APMEN GIS and Malaria Elimination Course:

Products available; Epi Info, Epi MAP, Health Mapper, ESRI -ArcGIS, SIG Epi, MapInfo, Arcpad.

Applied GIS to support routine operations:
- Geospatial Data Collection & GIS Layer Development Techniques for Malaria Elimination
  - Sources of GIS and associated data
    - GPS / PDA Data Collection (including practical fieldwork)
    - Basic GIS methods for developing data layers
    - Geo-coding techniques
- Geospatial Planning, Monitoring and Evaluation of Frontline Elimination Interventions
  - Practical examples of how to integrate routine collected data into a GIS
  - Thematic Mapping as a monitoring tool
- GIS Methods for Malaria Case Surveillance and Response

Spatial Data Analysis to support national surveillance and control of malaria:
- Development of descriptive disease maps
  - Standardized morbidity ratio maps
  - Mapping prevalence from survey
  - Mapping intervention coverage
- Development of smoothed point maps using survey data
  - Kernel smoothing maps
- Identification of spatial clustering of disease and detecting disease clusters
  - Satscan for cluster detection of point data
Presenters
Professor Xiao-Nong Zhou - Director National Institute of Parasitic Diseases Chinese Center for Disease Control and Prevention, Shanghai, China.

Gerard Kelly, GIS advisor in the Solomon’s and Vanuatu (both within the Ministry of Lands GIS department and the VBDCP).

Ricardo J. Soares Magalhães, Spatial Epidemiology of Infectious Disease, School of Population Health, University of Queensland, Australia

Mr. Eric Hale, Chief Monitoring Officer (currently Acting Programme Manager for monitoring National Vector Borne Disease Control Programme)

Attendance & Certificate
Participants will be expected to attend all sessions including the opening and closing session throughout the course. Throughout the course, participants will be assessed. A certificate of completion will be awarded to the successful participants, achieving the required standard and attendance.

Follow-up Activities
On completion of this course, the participants are expected to implement the knowledge, skills and expertise gained when they return to their place of work. Six months following completion of the course, they will be required to provide a brief written report to APMEN, of their achievements since the training.

It is also expected that they will communicate freely with the APMEN and other participants on technical matters in the spirit of networking.

Course Expenses

Travel, accommodation and expenses
The successful nominees will have their air and land transport organised and paid for by APMEN. APMEN will provide them with air travel by the most direct and economic mode and route, from their place of work to the accommodation in Shanghai, China and return. This will include all airport transfers.

Participants will be provided with a daily living allowance upon arrival in Shanghai, in accordance with WHO per diem rates.

Contact Information and Acknowledgements

Contact Course Coordinators
For more information, please feel free to contact the APMEN Secretariat at apmen@sph.uq.edu.au

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